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THROUGH THE MUNICIPAL BUILDING ARCH, NEW YORK CITY — Kenneth Clark

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Shadows and Straws

SINCE last winter, a committee of the Architectural League of New York has been studying the possibility of establishing a school for the teaching of design as applied less to the making of individual things and more to production in quantity, the committee seems frankly to have accepted the premise, Mr. Ashbee laid down, some years ago, in his book, "Shall We Stop Teaching Art?"—that the only way out of the present dilemma is to bring design within the domain of centralized industry. This point of view is not new, and there have been various efforts to provide systems of instruction in design and craftsmanship which would achieve the end sought. Indeed, very recently, we have had a most interesting book on the subject in Miss Helen Marot's "Creative Impulse in Industry." Her diagnosis of the situation is one of remarkable lucidity and although the kind of school she proposes to establish appears to meet with the approval of no less an authority than Professor Dewey, there are others who see, in her proposal, only one more attempt to compromise with that force which has so far defeated all our real educational aims—the force of commercialism.

Elsewhere in this issue there is printed an outline of the plan for the schools, which are to be under the government of a joint committee composed of representatives of the American Institute of Architects, the National Academy of Design, the Architectural League of New York, and of manufacturers.

It would be rather ungracious, at this juncture, to point out the variety and the nature of the obstacles against which the apprentice schools will have to contend. The new school cannot hope to avoid these obstacles, or to overcome them at the first combat. The struggle will be sharp, but it is one in which it were well worth while to engage, and the Institute is to be congratulated upon its opportunity to collaborate in an effort, the success of which will mean so much to the enrichment of architecture. The Architectural League deserves high praise for the courage with which it has so boldly entered the lists.

The founders of the new schools are to be congratulated on their choice of name. We are indeed tired of "Art" with a capital "A"; we are so tired of schools of "Industrial Arts," "Fine Arts," "Commercial Arts" that it is refreshing to meet with a "School of Design," for, after all, design and not art is the fundamental thing the craftsman or artisan needs to learn and understand, and which is the thing that puts character into his work. So "Schools of Design" is what it should be. Again the word "apprentice" is refreshing. We are accustomed to find schools promising to turn out masters in so many months or even so many weeks, and it is pleasing, therefore, to find a school which modestly proposes only to show apprentices the proper paths to follow.

THE DANGER OF EXTRAORDINARY unemployment during and immediately after the present demobilization seems a bugbear which looms large on the horizon. Many suggestions have been made with the view of taking care of this situation, should it arise. Among these suggestions is the interesting bill introduced January 21, by Senator Kenyon of

Iowa, providing for the creation of a United States Emergency Public Works Board, consisting of the Chief of Engineers of the United States Army, an officer of the Department of the Interior designated by the Secretary of the Interior, an officer of the Treasury designated by the Secretary of the Treasury, and two citizens appointed by the President with the advice and consent of the Senate. This board is to coöperate with all federal, state and municipal agencies entrusted with the execution of any public work, with the view of stabilizing industrial and employment conditions by stimulating useful public work where acute unemployment exists or is threatened. The board is directed to make investigations and reports concerning such public work in all parts of the country. The bill carries an appropriation of $100,000,000, which may be used to enable any agency of the federal government, having in charge some public work for which the existing appropriation is insufficient, to proceed with such work; to enable the Chief of Engineers to construct or repair such roads as the Secretary of War may certify to be of strategic or military value; to make advances for the transportation of workers to places where such public work is going on; and to pay the administrative expenses of the board. These allotments are to be made with a view of providing the maximum of public employment consistent with the wisest extension of the public works of the United States.

Another provision of the bill empowers the War Finance Corporation to make advances, from time to time, to any state in the Union, to enable that state, or any of its political subdivisions to carry on such public work within its borders as will relieve existing or threatened unemployment. Such advances should not exceed $300,000,000 at any one time, and should carry an interest charge of not less than 5 per cent.

Senator Kenyon's bill was read and referred to the Committee on Education and Labor.

AT THE CONVENTION of 1915, in Washington, there was adopted a resolution of amendment to the by-laws which struck out the clause which had hitherto provided that certain officers of the Institute must be chosen from among the fellows. This action was taken, if we remember correctly, without any opposition, and was intended to leave the fellowship with no privileges whatever, in order that it might become wholly an honorable preferment.

Possibly, the proponents of the amendment also had the idea of completely obliterating all differences in the membership class, since there still remains a distinction in the matter of dues. At any rate, the Board of Directors will propose, at the coming convention at Nashville, an amendment to the by-laws such as will extinguish the difference in dues, making them alike for both fellows and members.

Each year, of late, there have been discussions over the manner of choosing fellows for nomination. Some chapters wish the right of making their own suggestions to the jury of fellows, and of limiting the right of the jury to a choice only from the names suggested by the chapter. Others, on the contrary, think the chapter should have no choice in the matter. This differing point of view might be reconciled, perhaps, if the first were considered as more or less natural to a large chapter, and the second one equally natural to a small chapter.

In the latter case, it would be pretty sure to prove very embarrassing for a small group to make selections. But the time has come, perhaps, when the whole subject should be considered fundamentally, and especially in relation to our experiences of the last four years. As the Institute grows in numbers, the process of electing fellows will be likely to become more and more complicated, and to be less and less free from a certain injustice which is always present when the number to be elected in any one year is limited, either by law or by agreement. It is, therefore, in view of these facts, that there is published in this issue of the Journal, a history of the fellowship relation in the Institute. Thus it will be possible for all to follow this development, from the beginning up to the present time, and come to a conclusion with all the facts known. The subject has many aspects, but there will probably be a universal agreement on the underlying principle on which a final decision should be based: Is fellowship good or bad for the architectural profession?

Fellows and Fellowships

THE word "fellow" is of Scandinavian origin, and is derived from two words which have the literal significance of a laying together of property. Chaucer spelled it "felawe," and in the "Ancren Riwle" it appears as "feolauschipe." From this comparatively simple beginning its meaning has been transmuted into both gold and tinsel; to know what one means by the use of the word fellow today there must be a reference to the context.

In the sense of fellowship as a distinctive form of membership in a society or body, the word is used by analogy only, for it was borrowed, apparently, from the universities, where its significance is quite a different thing. In early days, all university members were called "scholars." Later on, the word "scholar" was confined to the students, and the word "fellow" was used to indicate those senior members of the graduate body who had been elected to the foundation by the corporate body. They shared in the government and enjoyed a fixed revenue out of the funds. That is the sense in which the word "fellow" is used in the English universities.

That there is a relationship between this use of the word and its original meaning is indicated, perhaps, by the fact that fellowships were usually constituted by the founders of the colleges to which they belonged. Others were provided in the form of endowments. In all cases, with few exceptions, their holders must have taken at least the first degree of Bachelor of Arts or student in the civil law. In 1854, under the University Act, fellowships were thrown open to all members of the universities of requisite standing. This entirely removed the former restrictions by which many fellowships were confined to founder's kin, to the inhabitants of certain dioceses, or to archdeaconries or other districts. Fellowships vary greatly in value. In 1870,* they were said to reach, at Oxford, as high as 700 or 800 pounds annually, while others amounted to less than 100 pounds.

In the medieval colleges, the fellows usually had a common boarding-place and were allowed regular stipends out of the revenues of the college. Singularly enough, the foundation of the University of Paris has been traced to a humble sleeping-place provided by a pious devotee, and also to small stipends allowed to eighteen scholar-clerks. In the colleges of the United States the word "fellow" often means trustee, but the ordinary fellowship is an honor carrying an allowance running as high as $1,000, in some cases, and the receipt of which carries varying obligations as to study, research, or travel.

As it is intended that the scope of this article shall be kept within the bounds of the uses of the words "fellow" and "fellowship," as signifying membership and membership relations in bodies such as the Institute, no effort has been made to explore the imposing history of the theory of organizations. Interesting as this might be, the gleanings would not be commensurate with the research, for it is with modern significances that we must deal, and toward the solution of a modern problem we must address our steps.

The original constitution of the Royal Institute of British Architects prescribed that

> "The Institute shall consist of three Classes of Members: Fellows, Associates, and Honorary Members. The Fellows shall be Architects who have been engaged as Principals for at least seven successive years in the practice of Civil Architecture. The Associates shall be persons engaged in the study of Civil Architecture or in practice less than seven years, and who have attained the age of twenty-one years." (Associates had no vote).

All officers were chosen from among the fellows, except that it was permissive for the president to be elected from the honorary members. It was also provided that:

> "Every nobleman or gentleman, who may present the Institute with a sum of not less than twenty-five guineas, may be elected as Honorary Fellow."

The initiation fee for fellows was fixed at five guineas, with annual dues of three guineas. Associates paid three guineas the first year, and two guineas each year thereafter. A fellow, upon entrance, enjoyed the privilege of compounding his dues by the payment of thirty guineas, or he could compound them at any later time on the payment of twenty-five guineas.

The organization thus appears to have been along the lines usual at that period and to have

*"Cyclopedia of Biblical, Theological and Ecclesiastical Literature," McCormick and Strong.

followed the traditional distinctions of England. As Mr. Webb has pointed out in his article in the Journal, this was not an attempt to organize the architectural profession. It was rather the expression of a wish, on the part of a small group of men, for fellowship in the sense of a social commingling for the discussions and debates which were then the order of the day in all learned societies. Professional men, such as architects, had not then begun to experience the pressure of social and economic transformations which today react upon the practice of architecture.

By contrast, the original constitution of the American Institute of Architects offers a field for much speculation. It came into existence twenty years later than that of the R.I.B.A., yet that it owes its inspiration to its English predecessor is scarcely to be doubted. That now-famous group of American architects also felt the need of closer acquaintance and understanding. They were not attempting to organize the Institute along the broad lines of today, although one feels certain that they had already begun to perceive the beginnings of several of the problems which now loom so large. But the significant thing about the constitution which they drew up and adopted in 1858 is that they substituted the word "professional" for the word "fellow:"

"The Institute shall consist of professional, associate, and honorary members. Professional members shall be Architects, who have been engaged as principals, for not less than three successive years, in the practice of Architecture. Associate members shall be persons who have studied Architecture for not less than three successive years, in the office of a professional architect. The title of honorary member may be conferred upon any individual of distinction. . . . The initiation fee shall be ten dollars for professional members, five dollars for associate members, payable in advance. The annual contribution shall be ten dollars for professional members, five dollars for associate members."

Why the word professional? It is clear from the balance of the wording that the Constitution of the R.I.B.A. had served as a model, yet the notable exception is the substitution to which we have alluded. Was it due to a feeling that membership distinctions should be avoided? This is a tenable supposition, for the United States had not at that time outgrown its faith in what it thought to be, at least, a democracy of social as well as of political life. Titles were not popular in those days, and our literature abounds with the frequent allusions to our disdain of them. The word "professional" implied a pretty clear fact. It indicated that the member had attained a degree of competency, for it must be remembered that a practice of three years as a principal, at that time, was relatively as fair a test of competency as could be expected. As in the case of the R.I.B.A., the officers could only be elected from the professional membership, there being no exception.

According to the proceedings available for examination, the first convention of the American Institute of Architects was held on October 22 and 23, 1867, but the minutes contain a conflicting statement to the effect that the convention was "Adjourned from October 8th." The records between 1858 and 1867 are scanty. They reveal but very little by way of discussions of the subject of membership.

From the minutes of a meeting of the Institute held on December 20, 1864, we quote the following:

"Mr. Vaux then opened the debate on the propriety of introducing a new order of membership into the Institute that should include Painters, Carvers, Carpenters, Masons and others whose pursuits are connected with the art of Architecture!

"He thought it would be well to establish such a new order under the name of Fellows, or any name of like import, to distinguish them from the Honroary Members, who were altogether outside of the profession and only connected with it as amateurs, while the Fellows would consist of experts in the various crafts allied to the art of Architecture, whose association with us would be valuable not so much in imparting information to the Institute on the branches in which they were especially experienced, as in giving the Fellows themselves a motive for ambition. He thought the lines separating the architects and the artisan were too strongly drawn and wished to have the distinction softened so that they might work harmoniously together to the great benefit of the arts connected with architecture."

The matter was finally laid on the table, but in the brief record of the discussion which followed Mr. Vaux's statement, there is no further allusion to the question of nomenclature. Yet it is evident that new forces were at work, for in the edition of the Constitution "As amended February 19, 1867," by a committee which had been appointed for the purpose, we find that:

"The Institute shall consist of Fellows, Associates and Honorary Members. The condition of membership as Fellows or Associates shall be the honorable practice of the profession, in accordance with the Constitution and By-laws of the Institute."

FELLOWS AND FELLOWSHIPS

In the meeting of February 5, 1867, there was a discussion of the report of the Special Committee on Constitution, but the only reference to the new classes of membership which had been proposed by the Committee gives but one clue to the reason for the change. When it was complained that members seemed not to know the difference in qualifications for fellows and associates, Mr. Post replied for the Committee:

"that the Committee on Admissions would decide that point, and referred to the examination of officers for colored troops in our Army, who were assigned their positions without application for any particular grade, as they were found fitted for one or another station."

The new By-laws further provided that candidates for membership should be such as nominated by a Chapter, or that candidates at a distance might be nominated by two fellows. The initiation fees were raised to $50 for fellows, and $25 for associates, and the dues to $20 and $10 respectively. There were also provided "Rules for the Government of the Chapters." The President's address at that convention contains the following:

"Since our last convention, a radical change has been effected in the organization of our Society, consisting in the constitutional provision for chapters in affiliation with the general and national objects of the Institute, while yet, for the government of local affairs, under the government of their own laws."

But the records of correspondence and discussion shed no light upon the reason for changing the title from "professional" to "fellow." One supposition is as good as another, perhaps, but the facts do indicate that the Institute felt the need of larger membership. This need is frequently alluded to in the proceedings of those days, and inasmuch as the title "fellow" still indicated no superior merit as established by executed work, it seems not easy to avoid the belief that it was thought to offer a more flattering inducement for joining than the title "professional." The restrictions thrown around it were practically none. An architect could be elected directly as a fellow, and it seemed to be largely a matter of expense which determined the choice. There evidently existed some convention by which associates could be advanced to fellowship, for in the year 1867 it is recorded that H. H. Richardson was so advanced.

That the change was influenced by the membership titles obtaining in the R.I.B.A. is suggested by a paragraph in the report of the Board of Trustees to the next convention, that of 1868:

"The Trustees considering it essential that Architects desirous of joining the Institute should make their applications for admission, in the form of a declaration, similar to that used by the Royal Institute of British Architects, caused a form to be drawn up, a copy of which is submitted for your approval."

The convention was held on December 8, 1868, but under date of June 2 of that year there appeared a new edition of the Constitution and By-laws, in which and for the first time, there appears a distinct qualification for fellowship. The clause is as follows:

"Fellows of the Institute shall be such practising architects as shall, upon their nomination by the Board of Trustees, be elected by the existing Fellows."

For the first time the right of election was taken away from the Board of Trustees and given to the fellows, but the right of nomination was left with the Board. At this same time, associates are described as "such practising architects as shall have been elected Members of the Chapters." No provision is made for advancing members to fellowship, but the By-laws begin to take on a more complicated appearance and indicate that problems of membership and organization were taking on a deep significance.

In the edition of the Constitution and By-laws as amended October 12, 1876, there is found a significant paragraph, to wit:

"Associates who shall pass to the grade of Fellows, shall pay the entrance fee of Fellows,"

but it is still clear that direct election to fellowship had not been in any sense given up. Except for allusions to these amendments in the addresses of the presidents or the reports of the Board of Trustees, there is comparatively nothing to throw light upon the causes which led to these amendments. The proceedings record no discussions of these subjects and are largely given over to the papers which were read and discussed at the conventions.

In a circular issued by the Secretary under date of December 15, 1869, it is stated that:

"Besides Honorary Members, the Institute consists of Fellows and Associates. Architects who are made Practising Members of any Chapter, become *ipso facto* Associates of the Institute; and Architects not belonging to any

Chapter may be elected Associates by the Board of Trustees, upon nomination by two Fellows."

At this same convention a large number of men were reported as having been elected directly to fellowship, while others were advanced from associateship to the higher grade. This was also true at the convention of 1871, although the numbers were smaller.

At the convention of 1880, when it was proposed to do away with the relationship between the Institute and the Chapters, chiefly perhaps by reason of the fact that under the then existing By-laws a member of a Chapter automatically became a member of the Institute and thus liable for the dues of both bodies, the report of the Trustees contains the following:

"With a desire to elevate the standard of membership, your Trustees would also propose that the number of Fellows be limited to seventy, and their election be governed under the present By-laws, until that number is completed, and afterwards any vacancy occurring shall be filled, not by vote of the Board of Trustees, as at present, but nominations shall be made from the list of Associates only, and a majority of the votes of Fellows shall be necessary to elect, the result of such elections to be declared at each annual convention."

Evidently the power to elect fellows had been given back to the Board of Trustees, and very evidently there had arisen a considerable dissatisfaction with the general situation. At the convention a paper was read by Mr. Mason. It had been prepared by Mr. Charles P. Hartshorn, Secretary of the Rhode Island Chapter, and is in the nature of a report upon the then proposed changes in the Constitution and By-laws. From this we take the following:

"The present distinction between Fellows and Associates (which in practice is governed only by the willingness to pay $15 or $7.50 per annum) should be abolished, and if any distinction is made it should be based on very different grounds. I would suggest that the number of Fellows be limited; that all members should enter the Institute as Associates; that when a vacancy occurs in the Fellowships, it should be filled by election at an annual convention by a three-fourths vote (of all members present by ballot), from the Associates who have practised the profession as principals not less than twenty years, or who have attained to eminence through important works well executed. This would make the rank of 'Fellow' at once an index of the standing of the recipient in his profession, and a prize to be worked and hoped for. (As it is now it will not be denied that the Associates are the equals and in some cases the superiors of the Fellows.) As the only path to Fellowship will be through the lower grade, it will be an inducement for all to enter that grade."

Little of the discussion is revealed in the proceedings, but when a member asked or suggested that the number be increased to one hundred, for the limit, Mr. Haight replied for the Board of Trustees that:

"they thought best not to make the number too large at present. There are now about fifty-five Fellows, and the limitation of that number would offer a premium to Associates to seek the rank of Fellows. At some future time it might be wise to extend the limit; but the theory of the Trustees was that the number of vacancies should always be less than that of applicants, otherwise the desire to attain to that rank would fall off very much."

The amendments were adopted and were as follows:

Article 1, Section 1. The number of Fellows of the Institute is limited to seventy.

Section 2. (Deals with the method of election, which remains substantially unchanged.)

Section 3. The Board of Trustees shall have power (without referring the matter to Chapters) to elect Fellows from among the older architects who do not belong to any Chapter organization, without the proviso of a semi-examination, i. e, by the presentation of plans and designs showing their work.

Section 4. The Board of Trustees shall have power, in their discretion to advance from the grade of Associate to that of Fellow any of the former who may have distinguished themselves by any specially meritorious work. Such advancement may be made without consultation with Chapters, and be considered as an honorable distinction; and the usual entrance fee of Fellows shall be remitted in such cases; but otherwise they shall be subject to the same annual dues as Fellows regularly nominated and elected.

Section 5. As soon as there shall have been seventy Fellows elected, as above provided, the above sections (2, 3, 4) shall become inoperative; and the following sections (6, 7, 8) shall go into operation.

Section 6. No person shall be elected a Fellow unless he is a practising architect, and shall have been proposed by two Fellows, and shall have been an Associate of the Institute for a period of at least twelve months immediately preceding his nomination.

Section 7. The name of every candidate, his residence, and the names of his proposers, must be mailed by the Secretary to every member of the Institute at least thirty days before the Annual Convention.

Here was a serious, if misguided, attempt to grapple with a situation which had all unconsciously developed. It is apparent that the title of fellow was not very highly esteemed, and that its acquisition was not hedged about by any qualifications such as should exist to achieve the object desired. The injustice of limiting the number to seventy was evidently not recognized, although a fundamental injustice resides

in every such limitation, and the problem seems to have been considered very largely from the practical standpoint.

The limitation was short-lived. In 1882, a vital difficulty had presented itself. By limiting the number of fellows, a limitation was imposed on the formation of new Chapters, which then required five fellows to organize. A committee was appointed to consider the whole question of membership and report its views on the subject within eight months, by circular, to the members of the Institute. This report was presented to the convention of 1883, and its recommendations were pointed out in the report of the Board of Trustees. The discussions are not contained in the proceedings, but the report as adopted is there printed, and is embodied in the By-laws, the next edition of which appears to be that as amended October 20, 1887. They are as follows:

"Fellows shall be such practising architects as shall, upon nomination by two Fellows, be elected by the Board of Trustees. The name and residence of every candidate, and with information in regard to his professional education and length of practice, shall be forwarded to the Secretary who shall thereupon send to every Fellow and Associate of the Institute a circular containing the name and residence of the candidate, the names of his proposers, and the following questions:

"Do you know the candidate proposed in the circular?

"Do you regard him as possessed of artistic, scientific and practical knowledge sufficient to fit him for the practice of the profession of architecture?

"Have you any reason to doubt that he pursues the honorable practice of the profession in accordance with the Constitution of the Institute?

"And every Fellow or Associate possessed of information in regard to the candidate shall deem it his duty immediately to answer in writing over his signature the above questions to the best of his knowledge and belief.

"A circular letter shall also be sent to each Chapter with the question: Does your Chapter know of any reason why —— —— should not be elected Fellow of the A. I. A.? If you do, please state the reason in full and return reply to the Secretary of the A. I. A.

"The Secretary shall obtain information in regard to every candidate by personally examining, when possible, his executed work, and must see and examine his drawings, specifications, etc., and inform the Board of Trustees of the result of his examination, but the Board may dispense with the examination of drawings, etc., when they consider it unnecessary.

"At any meeting of the Board of Trustees, held not less than twenty days after the issuing of the circular, it shall be in order for them to consider all communications in reference to the person proposed, to hear the report of the Secretary, which shall be fully entered upon the records, and to proceed to ballot for his admission. Any candidate who shall receive three-fifths of the votes cast, not being less than five votes, shall be declared elected.

"But should the opinion or verdict of any Chapter be adverse to the candidate proposed for membership in the Institute who may have resided or who is now residing under the jurisdiction of said Chapter, the same shall be considered binding upon the Board of Trustees in this matter.

"The Board of Trustees shall, after consulting each Chapter to see if there is any reason why such action should not be taken, have power, in their discretion, to advance from the grade of Associate to that of Fellow any of the former who may have distinguished themselves by any specially meritorious work. Such advancement shall be made, etc. (See 1881.)"

These By-laws are cited in full because their completeness represents the increasing perplexity which membership relations were causing the parent body. There appear signs that the powers of the Chapters had increased, and that the powers of the Board of Trustees were being gradually limited, yet no satisfactory standard of fellowship had yet been evolved and fellows could still be elected directly to the Institute. During each of the next succeeding years, up to the famous consolidation convention of 1889, the number of fellows directly elected was generally in excess of the number advanced from associateship.

At the convention of 1889 it developed that for the preceding year there had been a tacit agreement between the Institute and the Western Association under which no serious attempts were made to increase the membership of either body pending the final amalgamation of the two bodies on the terms which were then under discussion. By the adoption of the amended By-laws at this convention, jointly held by the two bodies, all members both of the Institute and of the Western Association became fellows and the associate membership was extinguished. The next edition of the By-laws, that adopted and amended at the Convention of 1889, thus contains the following striking section:

"The Institute shall consist of Fellows, of Corresponding Members and of Honorary Members."

It thus seems plain that, in the process of amalgamation, the necessity or advisability of which was no doubt due to the fact that problems of professional practice required coördinated effort and the backing of greater numbers, the fellowship class of members was one of the crucial points at issue, and that it became necessary either to abolish the title or confer it upon

all, at one stroke. The Institute had strayed a long way from its conception of membership as revealed under the original constitution, but it had likewise advanced a long way upon its now well-recognized task of winning increasing respect and appreciation for its members.

It may be interesting at this moment to examine the situation in respect to membership in the R.I.B.A. In its original charter of 1837, fellows are not described, but in the amended charter of 1887, they are stated to be:

"Architects who have attained the age of thirty years and who have been engaged as principals for at least seven successive years in the practice of Architecture. After the expiration of five years from the date of our Charter the Royal Institute shall have power to declare that every person desiring to be admitted as a Fellow shall be required to have passed such examination or examinations as may be directed by the Royal Institute. But in special cases the Council shall have power to dispense with such examination or examinations."

It will be noticed that the power of prescribing examinations was permissive, and that the Council still had large discretionary powers. That the question was not settled by the new charter is indicated in the following clause of the supplemental charter of 1909, in which it is provided that:

"After the date of this our Charter, no person shall, save as hereinafter provided, be admitted as a Fellow of the Royal Institute unless he shall at the time of admission be either (*a*) an Associate of the Royal Institute or a person who has passed an examination qualifying for admission to the class of Associates or (*b*) a Licentiate who has passed such examination or examinations as may from time to time be prescribed by the Council as a qualification for admission of Licentiates to the class of Fellows. Provided, however, that the Council shall have power to elect and admit as a Fellow any architect who shall have attained the age of thirty years and shall have been engaged as a principal for at least seven successive years in the practice of architecture as to whom the Council may resolve that it is desirable to elect and admit him as a Fellow."

This is the provision now obtaining and shows that the Council of the R.I.B.A. has power, in its discretion, to elect a fellow directly to membership, a power which does not now reside anywhere in the American Institute of Architects.

In 1891, the Constitution declared that:

"The condition of membership of Fellows shall be the honorable practice of the profession of architecture, in accordance with the Constitution and By-laws of the Institute,"

while the By-laws provided that:

"Fellows shall be practising architects residing in America, whose professional status shall be demonstrated to comply with the Constitution, and who shall be admitted or elected in the manner hereinafter set forth."

(Here follows a description of the method of balloting.)

"If upon counting the letter ballots received, it is found that five or more ballots have been cast against the admission of any candidate, he shall be declared rejected—otherwise he shall be declared duly elected a Fellow of the Institute.

"After October 23, 1890, no one shall be admitted to Fellowship in the American Institute of Architects who is not already a member of a Chapter of the Institute and whose admission to such Fellowship has not been recommended by the officers of his Chapter."

These By-laws rescind the provision of 1880, which was also modified in 1882, and for the first time wholly take away from the Board the power to elect to fellowship without the approval of the Chapters. There were at that time no associates, so that no rule was needed for advancement from that grade. Election was to fellowship itself.

In 1894, a further amendment provided that:

"No one shall be admitted to Fellowship in the American Institute of Architects who is not already a member of a Chapter of the Institute, or provisionally elected as such, and whose admission to such Fellowship has not been recommended by the officers of his Chapter, except as provided in Article X."

This was as follows:

"A practising architect whose professional office is at a greater distance than 25 miles from the headquarters of any Chapter may apply, in the manner heretofore prescribed, and become a Fellow of the Institute without first becoming a member of any Chapter and being approved by the officers of the same; but he shall become a member of a Chapter whenever one shall become available within the said limit."

This reaffirms the provision of 1891, but also takes care of the difficulties which had been found in electing architects to membership who were not located in the territory of Chapters, or who were so far away from headquarters as to preclude an advantageous membership.

Section 3 of this same Article X, (then known as the "Famous Article Ten") made it mandatory for Chapters to create Chapter memberships, even fixing the fees. It was thus proposed to elect to fellowship direct from Chapter membership, and to prevent the direct election of fellows. But it must again be remembered that there was but the one class of members in the Institute and that these restrictions were not

primarily thrown about the title of fellowship but about membership itself. Yet to encourage new memberships in territory where there were no Chapters, all restrictions as to Chapter membership were waived. This was not so unfair as it would at first appear, for Article X also provided that:

"Every practising member of a Chapter of the Institute admitted under the provisions of Section 3 of this Article, shall become a Fellow of the Institute, and no election of such new practising members shall take effect until the Institute shall have elected the candidate to Fellowship."

Thus a Chapter member had immediately to make application for membership in the Institute, but as there was but one class, he applied for election as a fellow. Evidently, as soon as a man had been taken into a Chapter, no others could be elected to Chapter membership until the preceding man had been admitted to the Institute. This seems to have been a provision for forcing Chapters to remain composed of Institute members, and a reading of the proceedings of this convention reveals a warm discussion and methods of parliamentary procedure which savor of the steam-roller. Yet nowhere is there any reference to the question of merit as applied to fellowship.

In 1898, things were much changed, for the Constitution now prescribes that:

"The membership of the Institute shall consist of Fellows, Associates, Corresponding and Honorary Members The conditions of membership in which shall be honorable service in the field of one of the above classes of membership as defined by the By-laws. The title of Fellow shall be granted for professional merit only."

This is apparently the first time where a fellow has been distinguished in the records of the Institute as one upon whom the title is to be conferred for professional merit only. Yet at that time by far the majority of the members of the Institute had become fellows upon no such basis whatever, so that the distinction in the year 1898, and for some time thereafter, could not have been a much-coveted one. But it is worthy of note that by the enactment of this By-law, the Institute helped decidedly to create the opinion that a fellowship did imply professional distinction, and it may not be unjust to credit a large majority of the membership with a desire to endow their fellowship with a mark of quality such as they knew it did not then possess. Previous to this time, and at all times in the history of the Institute up to 1898, application could be made directly for a fellowship, and the records show that most fellows were elected in that manner. The amendments of 1898 were reported by the Board of Trustees as having been adopted by letter ballot. They were also formally adopted at the convention, but the discussion is not recorded, so that one must search elsewhere for the basis which led to the restoration of the associate membership.

The By-laws adopted in 1898 were as follows:

"Fellows shall be resident architects of the United States. Architects engaged in professional education may be Fellows. A Fellow shall be a member of some Chapter within the state where his main office is located, if such a Chapter exists; otherwise he shall be a member of some Chapter in another state.

" . . . Fellows who are not Chapter members at the date of the adoption of these By-laws (1898) shall be *ipso facto* members of a special Chapter-At-Large having the same right of representation as other Chapters.

"Fellows may only be chosen from the ranks of Associate members, except in special cases established by a vote of the Board of Directors; and each such exemption, with the reason therefore shall be reported by the Secretary at the following annual Convention. Election to the rank of Fellow shall be for professional merit.

"Application for Fellowship shall be made through the Secretary of the Institute, in accordance with the form prescribed. . . . (The form was as follows):

"I respectfully apply for Fellowship in the American Institute of Architects. I have carefully examined the Constitution and By-laws of the Institute, and agree, if elected, to honorably maintain and obey them."

(There was also provided a form of application for associates.)

The Board still had power to elect directly to fellowship, and applications for that degree could still be made directly by the candidates, but otherwise the power of electing to fellowship was taken away from the Board for the first time, although it was not yet placed in the hands of the convention. The method of election was elaborate and perhaps is worth quoting in full:

"When an application for Fellowship duly made out, shall have been received by the Secretary of the Institute, he shall announce the fact of such application to every Fellow within the Chapter to which the applicant belongs, and shall request from them, upon ballots furnished, a yea or nay vote upon the desirability of the candidate. These ballots shall be submitted, with the application, photographs, etc., to the Board of Directors, and shall form part of the evidence enabling the Board of Directors to determine the eligibility of candidate to election. If then or later on the Directors so determine, the Secretary shall cause letter ballots upon the candidate's election to

be issued to all the Fellows of the Institute, except those in the applicant's Chapter, whose ballots, already cast, shall be counted in the general vote. The Board may postpone the action upon the application for a period of not over six months, within which time a general letter ballot must be ordered, or the candidate informed that his application is refused."

There was evident, at the enactment of these provisions, a growing tendency to challenge—not so much the merit of fellowship as the right to fellowship. For nine years the Institute had admitted members as fellows only. Yet it now restored the Associate Class. In seeking the answer to the question as to why this was done, we must again recognize the pressure of outside forces which needed greater numbers successfully to combat them. The Institute had changed—or was in slow process of changing—from a professional body of the early type to one where there was an insistent demand for help in raising the standards of the profession. It was then a body of 420 fellows and in the need for new members it is possible to infer that there was a due recognition of the fact that the title had long since ceased to have any particular meaning and a feeling that the time had come to grapple seriously with the problem of making it a coveted distinction. Yet it was not to be made too difficult of attainment. Applicants for membership could not be too greatly discouraged. Nor were they, it appears, since 60 associates were elected during the ensuing year.

In 1902 the following significant amendment to the By-laws appears:

"The Board of Directors may each year nominate from among the Associate Members of the Institute as candidates for Fellowship those who, in the opinion of the Board, have notably contributed to the advancement of the profession in design, construction, literature or education. The names selected by the Board, after having been submitted to the Chapter from which the candidate comes, shall be submitted to the Convention following the nomination, and if confirmed they shall be Fellows of the American Institute of Architects."

(Here follows a description of the method of balloting. Five or more negative votes prevented election.)

This was the first step toward making the election to fellowship a matter for the convention finally to decide. In 1909 it was further provided that there should be a similar procedure for nominations from the Chapter-at-Large. In 1911, the following By-laws were adopted:

"There shall exist two classes within the Institute: an active class to be known as Members, and an Honorary Class.

"The conditions of membership in either of these classes shall be honorable service in its respective field as defined by the By-laws.

"Among the Members there shall be a body of Fellows. The title 'Fellow' shall be granted for professional distinction only."

The method of election is then prescribed, and is too familiar to need repetition here. The Jury of Fellows was given the power of making the nominations, and the names of the candidates were required to be submitted to the Chapters. This brings the history of fellowship in the American Institute of Architects up to the point of present-day practice. As of interest, it may be well to cite these figures:

In the Annuary of 1917, there are listed the names of 179 fellows who were among the 420 fellows existing when the Associate Class was restored. Of these 179, only 9 were advanced to fellowship from the Associate Class. All the others were directly elected to fellowship; thus, as there are 124 other fellows in the Annuary of 1917, duly advanced in accordance with the custom since 1898, the percentage of unadvanced fellows is 56 per cent of the total. Naturally this will now change.

A reading of this digest is sufficient to indicate the problems which lie in wait for those who would contrive a method of bestowing a distinction upon a class of members in a professional body which shall never work an injustice. The problem ought perhaps to be examined fundamentally, when one would ask the question—is a membership distinction a source of weakness or of strength? If it is a source of strength, how can it be conferred so that the preferments will always be just and every member treated fairly? Limiting the number is unfair, since it arbitrarily imposes a hazard—the hazard of living—in order to obtain what one may be justly entitled to in comparison with the ability or merit of those upon whom it has been conferred. Trying to raise the standard, at any time, always imposes an injustice, since it deprives a certain number of men from gaining a distinction upon the same basis on which it was conferred upon those who had the luck to come earlier. In simple justice, it must be clear, that once a basis of fellowship is established, all those who pass the qualifications prescribed shall be made

fellows. To arbitrarily fix the number which shall be admitted in any given year imposes a hazard and an injustice, for the selection has then to be made upon some basis which shall appear to work the fairest. If fifty men meet the requirements at any time, they should in all fairness be treated alike. Otherwise, the injustice falls, not only upon them, but in so doing, carries with it the temptation to make selections diplomatically and without regard to actual degrees of merit. In certain societies, fellowships have fallen into such disrepute that men of any standing whatever would never think of using the designation after their names, for in the scramble for membership, restrictions were broken down until willingness to pay the extra fee demanded was the determining factor.

The problem is as old as the hills, but it takes on a new and more insistent character as social customs change, organizations grow, and the problems of professional practice become more and more closely involved in the turmoil of restless change and evolution. In the United States, for example, to fix an arbitrary standard for fellowship in the American Institute of Architects is almost impossible, since conditions vary greatly throughout the country. That is to say, the standard in New York City, or Chicago, or other metropolitan centers, would naturally be higher than in certain other localities. Opportunity is here a factor. Yet the effort to establish the fellowship upon a just and equitable basis can be seen to have passed through many experiments. If fellowship is a source of strength, the problem should be met with all of these facts plainly before those whose duty it is to solve it. It is possible that there is no just method of at one and the same time conferring fellowship for merit and maintaining it upon the high plane where it should be kept—or it is possible that it is a necessary thing which can only be maintained through the tacit consent of the many to sacrifice themselves for the few, as a means of advancing the prestige of a calling.

The United States Housing Corporation of the Department of Labor During the War

Following the suggestion made by Mr. Robert D. Kohn, in the January number of the Journal, wherein he named the architects and draughtsmen who worked in the Housing Division of the Emergency Fleet Corporation, we herewith publish a list of those who were identified with the Housing Corporation of the Department of Labor. This list was kindly furnished by Mr. Lionel Moses, Assistant Manager of the Corporation.

Ames, J. W.
Bennett, Harry, Architectural Division.
Belcher, H. D., Construction Division.
Blount, Geo. F., Architectural Division.
Boyd, D. K., Requirements Division.
Brown, Ambrose A., Construction Division.
Child, Stephen, Town Planning Division.
Cook, W. W., Construction Division.
Comey, Arthur C., Town Planning Division.
Cross, John W.
Crow, Jules
Desmond, T. H., Town Planning Division.
Dodge, R. I., Construction Division.
Dunning, N. Max, Requirements Division.
Dyer, M. A., Architectural Division.
Ellis, C. M., Requirements Division.
Fenner, Burt L., General Manager.
Francis, Frederick L., Design Information Section.
Gilkison, A. H., Architectural Division.
Goldberg, Ralph, Architectural Division.
Hamme, John B., Construction Division.
Hare, Herbert S., Town Planning Division.
Hubbard, H. V., Town Planning Division.
Ittner, Wm. B.
Jordan, Robert F., Architectural Division.
Kern, LeRoy E., Design Information Section.
Korn, Nathan, Architectural Division.
Krokyn, J. F., Architectural Division.
Kruse, Arthur M., Town Planning Division.
LaFarge, C. Grant, Assistant General Manager.
Leland, J. D., 3d., Vice-President.
Lewis, Wm. C., Construction Division.
Lippincott, Thos. B., Construction Division.
Lord, Austin W., Production Division.
McCulloch, R. A., Construction Division.
Mahurin, Guy N., Construction Division.
Martin, H. W., Construction Division.
Morton, H. W., Architectural Division.
Moses, Lionel, Assistant General Manager.
Olmsted, F. L., Town Planning Division.
Outhet, R. A., Town Planning Division.
Parker, Carl R., Town Planning Division.
Painter, Walter S., Construction Division.
Ramsdell, C. H., Town Planning Division.
Roberts, Frank, Architectural Division.
Sauer, Andrew J., Construction Division.
Snow, Raymond C., Construction Division.
Southgate, Donald W., Requirements Division.
Stone, James H., Architectural Division.
Temple, Geo. F., Architectural Division.
Treat, Albert W., Construction Division.
Van Pelt, John W., Production Division.
Videto, T. E., Construction Division.
Vogt, Oscar G., Design Information Section.
Walsh, J. C., Architectural Division.
Webster, Daniel T., Construction Division.
Willis, Wm. B., Architectural Division.
Winslow, H. L., Construction Division.
Worthington, A. M., Construction Division.
Wright, C. W., Construction Division.
Wyman, A. P., Town Planning Division.

Obituary

THEODORE ROOSEVELT

Honorary Member, A. I. A., 1909

THEODORE ROOSEVELT, twenty-sixth President of the United States, was an honorary member of the American Institute of Architects. That the Institute should have so signally honored itself, by conferring such honor as it could upon the foremost citizen of this country, was no perfunctory act. Rarely has honorary membership been more significant. For it grew from that same thing that kindled so many fires in the hearts of those whose worthy aims led them to the touch of this, the greatest heart of all. It was not that he was a patron of the arts; not that he was a connoisseur. It was that nothing human, nothing good, was foreign to him; that no honest plan of betterment presented to him would fail to elicit the swift response of his keen mind. So it was that he, with far less of the esthetic in his extraordinary nature, far less of apparent qualifications than many who lagged, understood and supported the Washington Plan; chose with perfect wisdom those who should make the White House the place of dignity it was meant to be. And so it was when Institute representatives laid before him the need for some orderly expert control over the character of what was designed for Government; they met with instant, lucid comprehension and there followed without delay that which vividly distinguished the whole career of Theodore Roosevelt—action. Thus was established what became the National Fine Arts Council.

None of the men who went to him that day can ever forget the experience. Accustomed to delay, to the need of tedious exposition, to lack of interest, to hope deferred, they found a vision that outran their own, a lightning rapidity of execution that meant they must bestir themselves to follow.

Whether to work or to play with him was to be swept upon the strong current of his indomitable energy into regions where old things wore new aspects, where the horizons of one's world were extended; was to feel one's sluggishness and inertia, one's timidities and above all, one's selfishness, to be shameful.

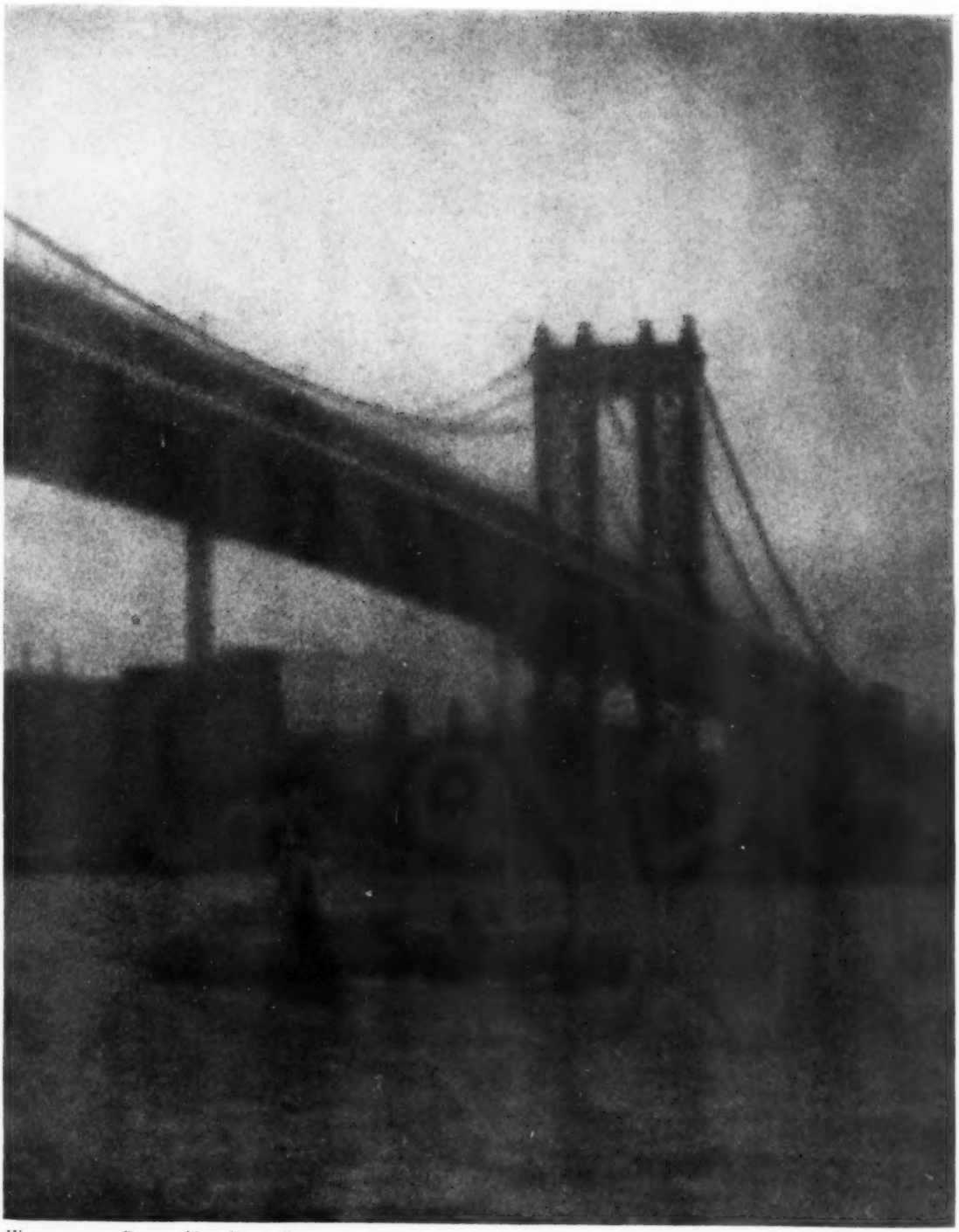
To our profession he rendered great service; as individuals we shared in what was probably his highest gift to American citizens, the quickening of the public conscience.

C. GRANT LA FARGE

West Street, New York City

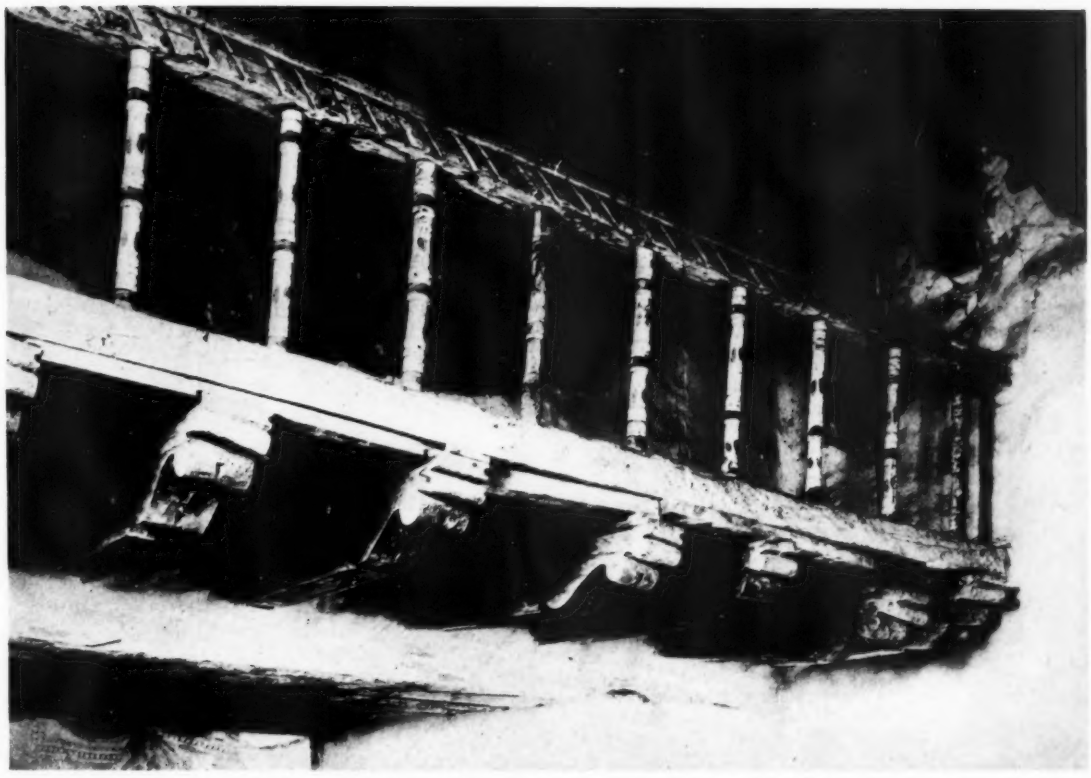
Kenneth Clark

Woolworth Building from the West, New York City — Kenneth Clark



WILLIAMSBURG BRIDGE, NEW YORK CITY — Kenneth Clark

On the Water Front, New York City — Kenneth Clark



Balcony in North Chapel, Santa Cruz de la Canada, N. M.

The Archaic Architecture of New Mexico

By WILLIAM TEMPLETON JOHNSON

Photographs by Jesse L. Nusbaum and the Author

IN the United States our progress in architecture has in the main consisted of tearing down and building anew. Even in the oldest cities of the Atlantic seaboard, there are comparatively few buildings which can really be called landmarks, and these, owing to our lack of respect for what the French call "monuments," exist in decreasing numbers.

To those of us who are wont to think of Wyck or Mount Vernon as having a venerable old age, it is astonishing to discover that before the first of our forefathers landed at Plymouth Rock there flourished along the Rio Grande Valley, in what is now New Mexico, an architecture so virile and enduring that, although the buildings were constructed of sun-dried bricks, numbers of them still exist and are in use today.

Excited by the marvelous stories of Friar Marcos, of Nice, about the "Seven Cities of Cibola," Vasquez de Coronado organized an exploring party in Mexico in 1540 and spent three years wandering through the Southwest, penetrating as far as the plains of Kansas and discovering the Grand Canyon of Arizona.

The Spaniards found none of the gold and precious stones described by Friar Marcos, but were tremendously impressed with the mode of life of the Indians they encountered. These Indians lived in vast communal houses, or pueblos, sometimes rising to a height of five stories and containing as many as fifteen hundred rooms. Coronado's soldiers spent a winter in one of these rookeries and it is best described in the words of his chronicler Castañeda:

"It is square, situated on a rock, with a large court or yard in the middle, containing the estufas. The houses are all alike, four stories high. One can go over the top

of the whole village without there being a street to hinder. There are corridors going all around it at the first two stories, by which one can go around the whole village. These are like outside balconies, and they are able to protect themselves under these. The houses do not have doors below, but they use ladders, which can be lifted up like a drawbridge, and so go up to the corridors which are on the inside of the village. As the doors of the houses open on the corridor of that story, the corridor serves as a street. The houses that open on the plain are right back of those that open on the court, and in time of war they go through those behind them. The village is enclosed by a low wall of stone."

House of Sylvanus G. Marley, Esq., Santa Fé, N. M.

For nearly sixty years after Coronado's remarkable trip the Indians were left in peaceful possession of their lands, but in 1598 the Rio Grande Valley was permanently occupied by the Spaniards and the work of converting the Indians began at once.

The zeal of the priests was fully as great as that of the two martyrs who stayed behind with the Indians rather than return with Coronado to Mexico. Between the years 1600 and 1630 nearly twenty-five churches were built in the Rio Grande Valley. While the buildings were probably designed by the priests, the style of architecture seems to have been strongly influenced by the manner of building of the Pueblo Indians who undoubtedly supplied the greater part of the manual labor.

The appearance of these Mission churches was archaic and very massive. They were usually cruciform with the apse in the shape of half a hexagon. The roofs were nearly flat with parapet walls. There were flanking bell-towers and usually balconies supported between the bell-towers by great beams. Often there was another corresponding balcony just within the church. A typical feature was the walled forecourt with a huge wooden cross, and there were usually irregular masses of monastic buildings attached to the churches. With the exception of a few churches built of rubble stone, all the building material was sun-dried (adobe) brick,

PICURIS CHURCH, N. M.

SANCTUARIO, CHIMAYO

Pueblo of Taos, N. M. Occupied Before Spanish Came in 1540

Palace of the Governors, Santa Fé, N. M.—A. D. 1606, Restored 1909

the walls being 4, 6, even as much as 10 feet thick. Enormous buttresses of various shapes were used, apparently where fancy seemed to dictate, but probably at points where the walls seemed to be weakening with age. The windows were small and infrequent and the doors, with the exception of the great entrance doors, small and low. The lintels were of heavy pine timber, the arch being used in only two known instances.

By far the most interesting detail of these churches was the method of forming the roof, massive pine logs being used for this purpose. The span was sometimes as much as 30 feet and, as the timbers extended through the outside walls, the logs had in some instances to be over 40 feet long. These timbers, spaced about 2 feet 6 inches apart, were either left in the round or roughly squared. Over them were placed small cedar poles about 2 inches in diameter laid herringbone, and this framework served for the roof proper of puddled adobe anywhere from 1 to 2 feet in thickness, pitched to rain-spouts formed of gouged-out logs. The weight of the roof beams was enormous and to relieve it single or double corbels were used, the butt ends, like the beams, running entirely through the walls.

This corbel with the bolster or bracket capital, used so extensively in New Mexico, seems to have been imported by the priests. Its line of genealogy, apparently, is as follows: The acanthus leaf modillion of the Roman cornice was freely used in the Italian Renaissance as a bracket or console; thereafter it was introduced into Spain and, with their usual liberty in architectural detail, the Spanish architects proceeded to graft it on a Doric capital in various forms.

In Mexico the bracket appears again in wood over stone columns and, finally, in New Mexico as the crowning feature of a wooden post. As will be seen from the illustrations, there are quantities of variations of both corbel and bolster, some simple and others ornate, though the carving is usually confined to what a neophyte could do with a gouge and chisel. Sometimes the beams, as well as the corbels, were carved and when the carving was colored the effect must have been very striking. The old beams occasionally reveal a trace of the original coloring, but most of the examples have been retouched by modern "experts."

The secular buildings are just as characteristic in their treatment as the churches. There is the inevitable "portale" or entrance porch with the bolster capitals, the placita or central court, the strong accent on horizontal lines, the small windows, the buttresses—these features proclaiming close kinship with the architecture of the Pueblos, even to the outdoor ovens and festoons of peppers hanging upon the walls to dry.

SANTA CRUZ DE LA CANADA—FRAMING OF CROSSING. TRIPLE CORBELS EACH 12" THICK

The simple mass of these ancient buildings, the water-worn softness of outlines, the warm tones of the adobe—all these qualities, contrasted with the matchless sky of New Mexico, go to make an impression of picturesque quality which is very striking.

In New Mexico the adobe architecture is the architecture of the soil and no other type seems to harmonize so well with its semi-desert sur-

roundings. For a long time its appropriateness and picturesque quality remained unappreciated. Some of the finest Mission churches were allowed to fall into shapeless masses of ruins from sheer neglect and others have been restored with a barbarity that would make Wyatt the iconoclast turn in his grave. Within the last few years, however, a distinct effort has been made to rejuvenate the style. The Santa Fé Railway erected a fascinating little hotel at Lamy, New Mexico; the old Palace of the Governors, dating from 1606, was shorn of its Mary Ann portico and carefully restored; quite a number of other buildings, including a sanitarium and an industrial school, have been designed; and the New Mexico building at the San Diego Exposition had for its prototype the ancient Mission church on the Rock of Acoma. A new Museum building at Santa Fé, costing $100,000, has recently been dedicated and in a year or two the architecture of this, the second oldest city in the United States, will form a novel study for any architect who is interested in things archaic and picturesque.

CHURCH AT ACOMA, A. D. 1629

GRANADA

Granada of the Moors

By GEORGIANA GODDARD KING

Photographs by E. H. LOWBER

GRANADA must be seen in the spring to be rightly prized. Only when the orchards are in bloom, and nightingales in song, and only with mind duly attuned by much reading in the old romances, and more reading in the older chronicles, should the traveller draw near. Granada should be approached with the memory of Muza and Celin, familiar and kindly; with Abencerrages, and Zegris, and el rey Chico, warm at heart; with the pity and sorrow of a lost cause and a foredoomed race stirring among the thoughts like evening airs in a pine forest.

The Vega of Granada was famous; the wide bottomland, sheltered all winter by the mountains, watered all summer from the melting snows. The Magnifico Micer Andres Navajero, as the Spaniards called him, who was ambassador of the Venetian republic to Charles V, came there in the May of 1526, not a generation after the fall of the city, and he never wearied of tasting the gardens and counting the fountains.

"The Darro comes down from the mountains between very fair fells," he writes, "that form a dale full of delicate fruit trees, so many that they make a wood; through that goes the river, murmuring among great boulders aplenty that lie in places of the channel, and elsewhere it runs silently; its banks are dark, lofty, and covered with green, very pleasant, peopled on one or the other side with many little houses, with their little garden-plots, half hidden among the trees that form groves. The water divides into streams and there seems but little, save when it rains, and shallow, and so clear that it seems less;" then he passes on to an account of the system of dams at different levels, and of open and subterranean canals for irrigation, and for "mills and other engines." "The dale through which the river flows is fair and pleasant, and receives as many graces from the stream as it lends thereto; the fells that encompass it are tilled to the top and so full of trees that they seem a wood; where the husbandman mounts not, the dale is full of shrubs, ferns, and other such like plants, by which the Darro passes till it enters Granada. There it runs at the foot of the Alhambra hill, crosses the streets of the city, runs under the square that you wot of, and when it quits Granada falls into the Genil."

The other side of the city the Vega is richer, more apt for gardens, and they supplant the

farm and woodland above. "All that part which lies below Granada, is right comely," says Navajero, "full of granges and parks, with founts and gardens and groves: and in some the fountains are large and fair, and these surpass the rest in curiosity and beauty, yet all the other parts that lie about Granada differ not much, all are comely, all marvelously pleasant and so abounding in water that there could not be more, and set with fruit trees of all sorts, plums of all kinds, nectarines, figs, peaches, apricots, cherries, and others, that scarce the sky shows, for the leafy boughs. All the fruits are exceedingly rich but a special kind of cherry is

GRANADA

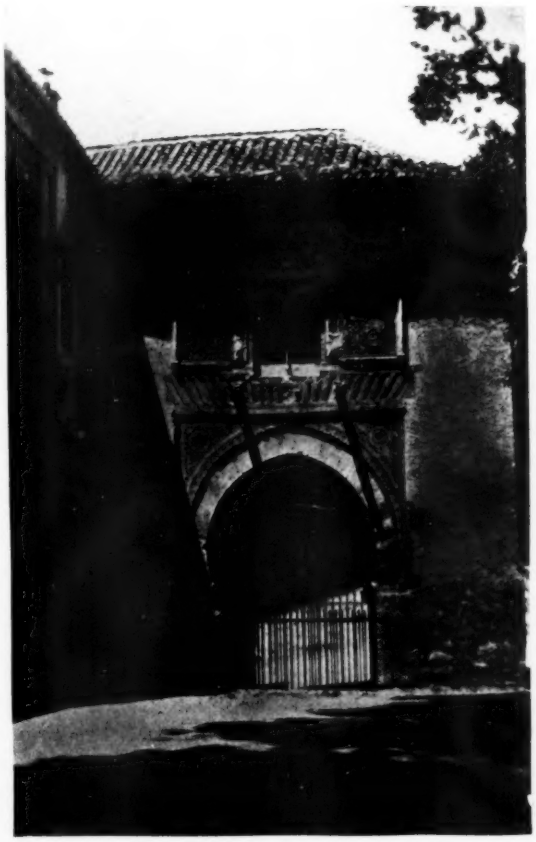
the finest in the world." And then the Venetian, who, like Petrarch before him, was an impassioned amateur of gardening, and never began a letter to his friend Ramusio without a question or a sigh for his own little place on the island of Murano, passes to the pomegranates, and the grapes, of which there is a special seedless kind, and the olive trees "so thick they are like a live-oak grove." And still the olive trees are ancient and immense.

The traveller crossing by railway the dust-bitten, wind-racked plain, will sigh as he compares it with this memorial, recollecting, however, that all that sweet garth and orchard may come again, and will; and again among the trees cabins shall be set thick, "small in truth, but each having roses and water, the white musk rose, and myrtles, and they are right pleasing;" though already, the Italian observes, "you see many houses ruined and gardens abandoned," for the Moriscoes are dwindling, as he notes elsewhere. This wide scattered region had a larger population than the city which it fed.

Further out in the swelling Vega, where overnight arose S. Fé, the city of the Holy Faith, and between the towns of Lorca and Antequera, it glowed ruddy and blue, waved green and silver, for another harvesting. All the plain would be, between one hour and the next, as one comes to see it in fancy, filled with horses and men, the delicate parti-coloured population of the elder tapestries, the fine folk and foplings of the latest miniatures. "*Alla en Granada la rica, instrumentos oi tocar*," says the romance: "I heard the sounding of instruments;" how suddenly it comes. Throughout the fifteenth century, it would seem, on the so-called Frontier, the barrier between Arab and Visogothic lineage, at Granada, Jaen, Baeza, stories from the *chansons de gestes* were played out in men's lives as now-a-days in the Sicilian puppet-theatre. Out of such stuff is made the whole of that enchanting book which is called a "History of the Bands of Zegris and Abencerrages, Moorish Knights of Granada, of the Civil Wars There Were Amongst

GRANADA.—OUTSIDE THE WALLS

GRANADA.—THE OLD MOAT



GRANADA

GRANADA.—QUEEN'S DRESSING ROOM

Them, and the Particular Battles in the Plain between Moors and Christians till the King D. Ferdinand the Fifth Won It." Though it was only, after all, a tale, like those of Sinbad, and the Three Calendars, and Scheharzade herself, yet it was like enough to history to content those whose forebears had been actors. The little figures out there on the plain are like the thirteenth century windows of French cathedrals, like that at Chartres which depicts in ruby, azure and vert the adventures of Charlemagne and the battle of Roncesvaux; or like the little carved ivories at the Cluny, mirror-case and bodkin, or an inlaid chess-board or casket, with their recurrent lovers, their falcons and their coursers, their bench and fount in a garden-close, their Castle of Love.

The traveller who happens to be lodging up among the ruins and restorations of the Alhambra, looking abroad over silver-blue olives and flushed and blossoming apple orchards, can see in fancy still the little figures moving among the trees, Fatima, Lindajara, Daraja and her Abencerrage, in the ample moonlight; can hear on the night air that blows up "*instrumentos tocar;*" the shrilling clarion and the furious trumpets, bridle chains that jingle and scimitars that clash, and under all, the drum beaten outside the palace. The traveller installed up there for a month or twain, if moderately friendly and not quite speechless, can strike up a good sort of acquaintance with old women and forest rangers, can follow the ancient moat around the mossy walls in prohibited parts, gaining fresh vistas and new aspects at every turn, can range the mountains, in the moonlit nights, with an old *garde-champetre;* and can watch the little goats at play in the roofless church which was the one-time grave of the great Isabella.

Like Siena, Granada lies on three hills and

GRANADA.—THE OLD MOAT

between them: the Albaicin, the Alcazaba, and the Alhambra. With this Navajero begins his description, like every one else: "The Alhambra is girt with walls, and is like a castle cut off from the city, which it dominates almost wholly; within the wall are many houses but what takes most space is a fair palace which was the Moorish kings,' which is, in truth, right fair, and wrought richly with fine marbles and other things, and the marbles are not in the walls, but in the pavement." From two of these lovely marbles, in truth, is the Hall of the Two Sisters named. The Venetian marvels at other things as well, windows made with a pretty device and most conveniently, "and excellent morisco work as well, in walls as in ceiling;" but anon his fancy is drawn away, from fount to fount, from court to court, into other deserted gardens, and in the midst of them ruined palaces. "A man may go out of the palace by a secret door, beyond the walls which compass it, and enter into a comely garden of another palace that lies farther up in the hill, which is called the Generalife—and the beauty of its pleasances and its waters is the fairest I have seen in Spain." And under myrtles he watched rabbits playing, which was a pretty thing. "The water, when you like, runs through all the palace and all its halls, in many of them a man is well off for the hours of sleep in summer." Further still he carries one: "In the time of the Moorish kings, if a man went on higher yet, he passed from the Generalife to other fair pleasances of a palace which was called the Alesares, and thence to other gardens of another palace, that now is called S. Helen's; and on all the ways by which you went from one palace to another were myrtle hedges; now all is ruined, and you see only a few lengths of roadway, pools without water, and some scrubby myrtle that has sprouted up from the stumps." He goes on yet, lost among the dried-out pools, the ruined pleasances, the roofless courts. "Still you see enough standing and know that the place was sweet, and perhaps a few wild myrtles and oranges linger."

In the Alhambra, however, the walls of the palace have been preserved with painful care; repairs have been going on since the time of Charles V, and by now it is hard to say, of any place or part, that a Moor has touched it. Plaster chiselled by the students of a school of art, coloured out of a German dye in blue and scarlet and gold, are a poor exchange for the in-

numerable stains and splendid dyes, however broken or dimmed, that Irving still could trace.

A large piece of the palace was torn down to make room for building what would, if finished, have been a noble palace for Charles V. Another large piece has been gnawed and nibbled away by time and private persons, for kitchen gardens and goat-yards, for lanes and habitations and squares and lodgings for tourists. But the centre of the whole still lies much as of old, grouped around the Court of Myrtles: on the left, a rabbit warren of rooms marked by charming signs of habitation long subsequent to the Moor, and a place of worship in the midst of these, and elsewhere, the so-called Old Mosque; on the right the Court of Lions, and the famous apartments opening therefrom. At the foot of it, fairly overhanging the river and commanding a wide sweep where it opens upon the Vega, looking down, in the spring, into rose-and-snow all a-toss, and ringing with sleepless nightingales, a great hall is reared; you lean in an embrasure and look from the window, and the world drops away below your feet; you turn within, and the dimmed splendour floods up to the far-off tarnished ceiling, and the imagination swirls like a swimmer in tides. Here was where the King received ambassadors, their minds bewitched and drowsy under the spell of the place, with its ever-changing colours on the porcelain, like a pigeon's breast; with its tireless interlaces that never come back or pause, its fleeting polygons that lulled the Arab's fancy like a dance, while it fed his mysticism like a drug.

The King did justice in quite another place, accessible on every hand, in a portico or range of little chambers beyond the Court of the Lions, where oval domes are painted with gold-leaf and ultramarine laid thick upon cracked leather, like bronze and lacquer work out of Japan, where water runs lisping, in small tiled channels, and leaps tinkling from a shivering pool at each arrest.

Other such fountains play in the chambers most dreamed of, most desired, the Hall of the Two Sisters, that of the Abencerrages, the Bower of Lindajara. Here under the deep domes and semidomes and quarter-domes that span the corners, the so-called honeycomb vaulting multiplies and interlocks. It is all that travellers said of it; it is delicious, it is luxurious, it is incredible. There was an old-fashioned notion that Arab architecture derived from the tent, as Greek from the cabin and Gothic from the hut: well, standing here, one believes it. Under these multiplied mouldings, dazzling, receding, leading the eye back, and again withdrawing, and back again, the pull of gravitation ceases. At the most ecstatic, Gothic still plants a foot and rears a head; this hangs in suspension from above, like Mahomet's coffin.

To one accustomed to Italian palaces, the oddest thing is the small scale of it all. Of the chief rooms, few of them are large; the flanking rooms are no more than alcoves. In royal building of the fourteenth century over in Catalonia, luxurious and half exotic, at SS. Creus, the present writer felt the same: the palace chambers, in that burial-place of kings, are tiny, like an inlaid cabinet or a Chinese ivory toy. The trait is most likely oriental, indeed. Here, need it be said, you move in the Arabian Nights. Here you could never have any privacy, any silence, any secrets. And standing here you understand better both the loves and the hates of the harem: the latter promptly, when rival favourites should have, it would seem, fairly to dress in full view of one another, to set up their mirrors back to back in order to paint the lips and mark the eyebrows and dye the finger nails, feeling each other's warm arm, breathing each other's sweet breath. So, too, one understands how the young prince, the heir or the Queen Mother's child, growing up into adolescence in this sort of scented intimacy, before anyone dreamed of it should be fatally in love, sometimes with a younger wife, sometimes with a favourite slave, or a slave that the King had not yet so much as seen.

When the moonlight is strong and the nightingales are loud, Granada shakes out her old royalty and wraps it about her again. Of the odour of May, of the snow-cold mountain wind, of the sound of falling waters, the old spell still is woven. Through the dim sorrows of the romances, the Alhambra shines like a star.

The National Apprentice Schools of Design

IN an address delivered before the Joint Committee on National Apprentice Schools of Design, at a dinner of the Architectural League of New York, on January fifteenth last, the President of the League, Mr. H. Van Buren Magonigle, outlined the plans and objects of the schools it is now proposed to inaugurate. We quote from Mr. Magonigle's address as follows:

In facing and in dealing with the stern realities of the past four years, the artist has learned to exercise a common sense that will save him from some of the pitfalls that have swallowed up so many earnest attempts to introduce art into manufactures. The failure of the movement instituted by the group of which William Morris was a member may be partly ascribed to the failure to deal with conditions as they were. And among the mistakes they made was a demand for a return to the old slow methods of production by hand—a very noble but sadly impractical gesture. We have a saner point of view now, I think; we realize that we are men of our own century, not another; that conditions of life, of manufacture, and of distribution, are totally different from any in the world's previous history; that we reckon our population in millions, where, in Renaissance times, they were counted by thousands; that the least of these millions now demand and can command the possession of things which only the rich or the noble then possessed; that this means they must be produced in quantity and this means the use of machinery in many crafts. Part of our problem, therefore, is to see that the things our millions buy are beautiful things. . . .

It is the function and the privilege of the artist to help create these beautiful things. The single piece made by hand for the individual of taste and refinement will always have its market; we must create agencies for the training of the man or woman who makes these things; we must train the designers of the things made in quantity; and we must also train the designers and craftsmen who create or carry out the designs of others in another field which lies between these two extremes—in which, as in furniture, for example, the machine and the hand have an almost equal part in fashioning pieces in moderate quantities—neither on the scale of the vast yardage of the textile mills nor on that of the individual candlestick from the obscure studio.

Where are these designers and craftsmen to be trained? Are the present schools effective? We believe not. We are of the opinion that the majority of teachers are grossly incompetent, that the systems of instruction are amateurish and superficial, and the schools themselves are not interlocked with the crafts and trades. We do not believe that the professional pedagogue, with his cut and dried notions, is qualified to teach such subjects. He does not know them from the inside. The practising (and therefore practical) artist, and the craftsman who knows his job, are the proper teachers. We believe that it is better to have teaching done by the men who know, not so much about how to teach in the pedagogical sense, as how to *do* the thing they essay to teach. The student will learn more from the man who knows how to do it, than from the man who has only learned how to talk about it. The greater the artist, the more skilful and enthusiastic the craftsman who greets the novice on the threshold of the school, the better chance the boy has of realizing the dignity of the craft he proposes to enter, the better chance that his interest may be aroused and, above all, sustained—for it is a lamentable fact that only a small proportion of boys who follow the manual crafts courses take them up as a means of livelihood.

It is in the light of these and other factors, that, since last winter, a committee of the Architectural League of New York, appointed with reference to their standing, knowledge, and experience in education and in the arts, has been working out a plan for National Apprentice Schools of Design. We are proud and glad to announce that the National Academy of Design and the American Institute of Architects have joined forces with us and have appointed distinguished representatives as members of a Joint Committee for the government of the schools. This assures the schools of such a powerful artistic backing as has never before been marshalled to the support of any school in this country; it means the support of the most distinguished, most representative bodies of practitioners of the arts to be found—architects of large experience in design, in affairs, in the organization and execution of great enterprises; painters of cultivation, vision, and skill in art and in life; sculptors with that faculty for seeing a thing in three dimensions, for translating an abstract vision into terms of the concrete, which makes them equally at home in the ideal and the practical world; craftsmen and designers for the crafts of distinguished ability, well balanced as such men are bound to be between theory and practice.

The name we have selected for the schools is expressive of their scope and character—National *Apprentice* Schools of Design. We wish to emphasize their national scope and particularly the character implied by the word "Apprentice." The name also indicates more than one school. As to "Design" we believe that word to be inclusively descriptive of every art there is.

We propose the establishment of unit schools on similar principles and of similar structure wherever there is a field for them, all under the government of a Joint Committee, composed, for the present, of representatives of the Manufacturers, the Architectural League, the National Academy of Design, and the American Institute of Architects. To each unit school a charter would be issued upon an agreement that the school should be conducted upon the principles laid down by the Joint Committee. Each unit school would have its own director; a lecturer; and might have one or many classes, each with its own instructor. If a number of such units were established in the same city they might or might not have the same lecturer on, and teacher of, the theory of design, historic ornament, the history of craftsmanship, and the like; or the lecturer and the director may be one person. The director of the unit or the lecturer may or may not be a craftsman—*the instructors must be, and be actively engaged in their craft.*

THE NATIONAL APPRENTICE SCHOOLS OF DESIGN

We have determined upon three basic principles of instruction:

1. The simultaneous instruction of the student in craftsmanship and in design.

2. That the crafts shall be taught only by actual practitioners of the crafts.

3. That design must be based upon historic precedent and not merely on suggestions from nature, using nature as a freshening influence but not as an original source of inspiration.

We wish to accomplish two purposes in one: To train designers who know intimately, by actual work in them, the technical processes of the crafts for which they are designers and to train competent craftsmen who can make their own designs, not merely execute the designs of others. The curse of America is superficiality; the curse of the schools is the impractical methods of teaching; the curse and the blight on all the crafts is that the designer knows little or nothing of the nature of the material in which the design is to be executed, its possibilities and its limitations, nor the technical processes involved, nor the tools by which it is given its special character. No craft can be developed from the outside—it must grow from within; and, therefore, we also wish to see craftsmen developed who will themselves make a rough drawing as a general guide and then work out the details at the forge or on the bench.

At the beginning, there will be evening classes only. As soon as possible, however, there should be both day and night classes. In the meantime, such students who wish may work in the daytime also. Instruction will be free but there will be a small matriculation fee per season.

We believe our general principles to be sound, but, we regard them as tentative and subject to modification upon test. We believe that upon every ground it is the part of wisdom to start on a modest scale and grow. In casting about for the best crafts with which to start we selected two—wrought iron, and textile designing and printing—for several reasons; we are able to secure the highest class of talent for instructors, the equipment is not excessively expensive, the crafts are attractive to students and promise them good wages, and there is a demand for more and better craftsmen and designers in them. Mr. Samuel Yellin, of Philadelphia, has enthusiastically agreed to teach the class in wrought iron. We had hoped to secure the services of Mr. Harry Wearne in the textile class, but he is procuring us a substitute; our desire is, of course, that this class may cover the whole field ultimately—to weave, to punch Jacquard cards, to engrave rollers; to supply the trades with designers or craftsmen according to the demand. We are advised, on unimpeachable authority, that instruction in block printing is an excellent preparation for textile designers and an excellent way to prove the designer's work. But classes in other trades should be established at the earliest possible moment —in furniture, in tapestry weaving, in jewelry design and execution, in any craft in which a demand may exist. We may safely leave modelling and carving, for the time being, to the many classes in these now existing.

The Director of the first unit to be established will probably be Mr. Leon V. Solon, the son of the great potter, who was at the head of the Liverpool School of Art for some years.

The Lecturer will be Mr. C. Howard Walker, of Boston, a practising architect, for years connected with the Boston Museum School, the best man, bar none, we could possibly have secured.

The National Academy of Design provides commodious and well lighted quarters in their school building at One Hundred and Ninth Street.

For a student body we may draw on the Academy Schools and on those of Cooper Union perhaps, but we should prefer above all to recruit them direct from the crafts, taking individuals with some considerable knowledge either of design or of craftsmanship and carrying them further; in fact, for the first year, we consider the latter procedure very important. We must at all times, of course, take the labor demand and the unions into account.

Report of the Milwaukee Housing Commission

A commission composed of eleven members and of which Wm. H. Schuchardt was chairman, was appointed by the mayor of Milwaukee to investigate housing conditions, to formulate a policy aiming to correct such housing evils as were found to exist and to suggest methods whereby the growth of such evils might be checked. The commission was divided into two groups, one to find ways and means to bring about immediate relief, the other to study the best methods pursued here and abroad, and to offer a plan of procedure whereby all elements of the social structure might be housed properly and economically in adequate environments. The second group of this commission has recently published an admirable report which is herewith quoted at length:

"In approaching the housing problem in its broader aspect, we must not fail to appreciate the gradual change in the concept of government, which has been manifested so conspicuously in England and on the continent during the last decade or two and to some degree in this country. Legislation relating to social amelioration, to transportation, to land improvement and development, and to public health has expanded the functions of government far beyond the older concepts of government (which concerned themselves largely with restrictive legislation), and has more fully organized nations to achieve prosperity and stability because it has put the welfare of the whole above the welfare of groups or individuals. Without the acceptance of this newer view of the functions of government, housing reform is not possible of accomplishment.

"The solution of the housing problem involves:

"(*a*) The elimination of speculative land values in some residential districts.

"(*b*) Zoning of the city to safeguard all residential districts.

"(*c*) Economical and adequate planning of streets, transportation, sewage disposal, water supply, lighting, planting of trees, etc.

"(*d*) Elimination of waste in construction of homes.

"(*e*) Acquiring for wage earners the benefits of ownership without interfering with labor mobility.

"(*f*) Legislation aiming to stimulate the erection of wage earners' homes.

"(*g*) Public instruction as to the possibilities of housing betterment.

(*a*) The Elimination of Speculative Land Value

"The unearned increment of land value is held to be one of the chief causes of city slums and its control by the government seems to be, among others, a logical and necessary expedient to check physical and social deterioration incident to improper housing. Increasing values of land gradually restrict the size and quality of homes to a level inconsistent with the higher ideals of democracy and, therefore, private housing enterprises have not more than set an example which speculative builders cannot afford to follow. Today speculative building methods are almost exclusively resorted to for providing wage earners' homes and the chief evidence of the failure of such procedure lies in the fact that either housing evils exist in almost every community or are imminent. Uncontrolled speculation in this field is so closely akin to exploitation that to favor its continuation is to propose that workingmen may, with propriety, be exploited.

"Experiments in Europe seem to indicate that the most effective method employed to eliminate the burden of speculative land values is that of encouraging municipal ownership of large tracts of land which may be leased to and eventually purchased by properly constituted co-partnership home building societies. In the main, the various schemes adopted aim to extend to home seekers the credit of the government without imposing additional burdens on taxpayers, for to be of value to the community housing projects must be self-supporting. It is reasonable to assume that similar methods would assure to industrial workers in this state the benefits accruing to European workers and your commission recommends that such legislation be enacted as may be necessary to accomplish the desired results. The Commonwealth of Massachusetts has taken an initial step in this direction and it seems proper that Wisconsin should do likewise.

(*b*) Zoning of Districts for Residential Purposes

"The zoning of the city as to determination of use of land should be expedited by the Board of Public Land Commissioners.

(*c*) Economical and Adequate Planning of Streets, Etc.

"The powers of the Board of Public Land Commissioners should be extended to enable it to properly plan for outlying districts the layout of streets, grades, recreation grounds, transportation, etc., consistent with a general city plan. The very considerable waste of money due to private platting of land is all charged to property owners or tenants and militates against low rents.

"In medieval times the city walls necessitated excessive crowding of those who found protection behind them. Speculative land values and poor transportation facilities have, as it were, become the city walls of today, except in so far that they offer no protection. To countenance inadequate transportation from industrial districts to residential districts is to accept concentration in tenements and even slums as inevitable. And a system of transportation which, in a large city does not permit of rapid transit service to the outskirts cannot be deemed as adequate. Cheap land, pleasant homes in adequate surroundings are not available to wage earners when several hours per day must be spent in travel and when the fare is excessive. Your commission suggests that the Railroad Commission exert its influence with transportation companies to the end that plans be now prepared for rapid transit service to the surrounding cities and villages and to future residential districts.

(*d*) Elimination of Waste in Construction

"The building ordinances of Milwaukee should be carefully scrutinized as to requirements which may be extravagant in wage earners' homes. Your commission recommends that the Wisconsin Chapter, American Institute of Architects, and the Milwaukee Builders' Club be invited to report on possible changes in the building ordinances which may lessen the cost of building without lowering standards of construction.

"The advantages to be gained by collective building should accrue to the occupants and not to building speculators. The unit cost can be materially cut by erecting groups of houses under one contract, but the saving does not benefit the wage earner unless he is a stockholder of the building association or company.

(*e*) Acquiring for Wage Earners the Benefits of Ownership Without Interfering with Labor Mobility

"Americans have long harbored the idea that ownership of his home makes a man a better citizen. This is a misconception unless the benefits of such ownership outweigh its burdens. It must be borne in mind that ownership with most wage earners means the carrying of a mortgage, with the constant fear of foreclosure. It also means a very restricted area in which employment may be sought.

"Co-partnership tenants societies, as organized in Europe, grant to the tenants practically all of the benefits of individual ownership without the usually accompanying burdens. Sixty coöperative societies in England, and more in Belgium and Germany, have placed the method beyond the experimental stage and its adoption in this country seems advisable. In a co-partnership society the occupant of a home neither buys nor rents in the usual meaning of those terms. He acquires the value of a home without curtailing his mobility, as his investment in the society's stocks, if not always transferable without loss, will at least net him as much income as any safe security. His savings are not lost should he find it expedient to remove to another locality. The interests of tenant and investor are identical. No member lays claim to ownership in one house; he lays claim to part ownership in the whole estate.

REPORT OF THE MILWAUKEE HOUSING COMMISSION

(*f*) Legislation Aiming to Stimulate the Erection of Wage Earners' Homes

"Speculative building methods have failed in Europe and in this country to provide wage earners' homes of a type commensurate with the cost involved. Under this system it is quite impossible to build wholesome dwellings for low-paid workers. It, therefore, seems to be a duty of the state to devise methods whereby the new spirit of common responsibility for the community welfare, which is true democracy, may provide a better means of safeguarding the homes of the people against bad conditions than a category of legal restrictions. Constructive legislation stimulating the erection of wholesome homes for wage earners through state or municipal loans is no more class legislation than is legislation establishing schools, hospitals or public parks. It should aim to remove the objectionable features of present methods and make it possible for all people in Wisconsin to enjoy those environments which make for wholesome, contented lives. Progress in this direction is being made elsewhere. It should be possible of accomplishment in this state.

(*g*) Public Instruction as to the Possibilities of Housing Betterment

"Housing reform movements cannot be successful without a clear understanding and coöperation on the part of the public, and your commission recommends that assembly halls in public schools be utilized for the purpose of spreading the necessary information."

Notes by the Wayside

EXQUISITE CRAFTSMANSHIP is not as common these days as it should be. It is usual to turn things out by the mile and the million, and, of course, such quantity production, and craftsmanship showing love of labor, do not go hand in hand. So it is a rare delight to encounter such a book as Frederic W. Goudy's "The Alphabet." The letterer and the compositor will be doubly interested in the book, but as great a thrill will come to lovers of the beautiful and especially to lovers of beautiful books. "The Alphabet" is valuable reading, but as this is not a review but a tribute to good craftsmanship, this reference to the text must suffice. For lovers of really good typography and good honest workmanship, here is a book whose pages sparkle with the brilliancy of a grand old manuscript. There is the loving hand of the fine craftsman in every letter. Printed on fine paper, every page is a treat. The types used were designed by Mr. Goudy and set by hand by Mrs. Goudy; the printing is just what good printing ought to be. The words are legible while good to look at, the spacing is correct and true, the color uniform. Those who are losing faith in the craftsmanship of the day should see and own this book as a tonic for their weakening faith. Let us hope that Mr. and Mrs. Goudy will give us more and more of their work. This world needs it.

QUITE RECENTLY two colossal hotels were opened in New York City. Of their tremendous size and ingenious appointments, nothing need be said here. We are accustomed to such things in America and especially in our large cities. But there are two things about these buildings that are both significant and hopeful. When we finally emerged from the architectural horrors of the Victorian age, which horrors were reflected in our hotel buildings perhaps more than in anything else, we went through a classic period when these styles were little understood. Then we came into a period of better understood design, but with this better understanding came an extravagant riot of detail, high color, gilding and imitation gilding, and scagliola of all colors. The lobbies and public rooms of our hotels became the least restful and least homelike places in our cities. Blank wall spaces and harmonious color schemes seemed to be tabooed. Gradually this was improved, and a few years ago, several notable hotels were built in the Adam style, and, though still elaborate and extravagant, were refined and dignified—they really bore the atmosphere of a *home* for travellers. Luxury and display were still evident, however. In these two latest hotels, another step in the right direction has been taken. They are simple, attractive, quiet in color, and there is no ostentatious, lavish display. But the most unusual thing is that there is evidence everywhere of restraint in spending money for frills and furbelows, evidence of an attempt to pay only for the attainment of decent, wholesome dignity. This means, of course, that the patrons' dollars will go more toward buying service and less toward paying interest on unnecessary and uncalled-for investment. Comfortable, clean, and æsthetically pleasing environment with the best of service, all at a reasonable price, is what a hotel should offer. Making the patron pay for lavish and useless display seems to be becoming less fashionable. This is probably one of the reactions due to the war—our whole lives seem destined to become more simple, more wholesome, and more reasonable.

IT IS NOT DIFFICULT for me to understand how a great painting, a great piece of sculpture, or a great work of architecture may be conceived. It is not difficult to understand how the designer of these can visualize a more or less distinct image of what he wishes to obtain and then work toward that image, gradually building up, modifying and doing over until the result at least approaches the prevision. But how is a great piece of music conceived? I cannot comprehend this. When I hear such a masterpiece as Tschaikovsky's Fifth Symphony, it is impossible for me to understand how the human mind is capable of preconceiving even the faintest outline of such a composition. How can a thing like that be thought out? It seems like something supernatural, like an inspiration, not something which can be planned and thought out beforehand. Perhaps my slight knowledge of the first arts and my ignorance of music may account for the difference in understanding, but it is bewildering.

Book Reviews

Cottage Designs. Housing of the Working Classes in England and Wales. Royal Institute of British Architects, 9 Conduit Street, London, W. Price 5 shillings, net.

Readers of the Journal will doubtless remember that in the number for July, 1918, were published a number of the premiated designs submitted in the competition for workingmen's houses held under the auspices of the Royal Institute of British Architects. Both the form of competition and the designs were interesting. The country, for the purposes of the competition, was divided into six districts or areas, and four classes of houses, varying in accommodations and cost, were provided for each district. The premiated designs, including a summary of the program and other data of the competition, comprise the subject matter of this interesting book.

Decorative Textiles. By George Leland Hunter. J. B. Lippincott Company, Philadelphia and London; The Dean-Hicks Company, Grand Rapids. 1918. Limited edition printed from type and type distributed. 580 illustrations; 27 plates in color. $15.

One never is able really to enjoy the books one is asked to review; others we may approach in a carefree spirit without the inevitable preoccupations of the conscientious reviewer—the realization that here may be a work into which a man has put much of himself, burnt the midnight oil, fertilized with his sweat and sent out into the world with a tremulous hope, a shy pride—the anxiety to do strict justice, to avoid equally the flippant and the ponderous tone, neither to break a butterfly upon the wheel nor to whip Leviathan with a posy—to avoid, above all, the inexcusable fault of conveying the impression that the reviewer is a vastly more knowing fellow than the author—these considerations interpose themselves and affect one's whole mental attitude—which should be simple and one's mind "a large clean vessel" held out to receive the outpourings of the author's spirit; in every book it is the spirit of the author we hope to find; it is the spirit of the author that shall determine whether the book will be quick with life now and always or merely be so much paper, so much ink, so much tedium to add to the sum of the world's *ennui*. This is true whether the subject is seen athwart a temperament or whether the temperament is so steeped in the spirit of the subject that they become one to the reader—and equally true when that temperament or that spirit seems to be absent.

The volume before us was heralded with considerable pomp of specimen pages and illustrations. It is an admirable piece of typography—a handsome type page with fine margins—the same calendered paper for letterpress and illustrations—the halftone illustrations excellent, the colored plates not so successful, of imperfect register in some instances and slightly muddy in tone—not to be compared with the reproductions of textiles in "*Etoffes Japonnaises*." It is, with 580 illustrations, copiously and well illustrated. The system of numbering the plates so that, instead of being consecutive throughout the book, each chapter has its own series, has no special advantage, since the plates pertinent to each chapter were segregated anyway, and has the disadvantage in cross reference that the reference is made to "Plate XXI, Chapter VI" and forces first a reference to the index to find the page upon which the chapter begins. "Plate XXI, facing page 160" would be much simpler. If makers of books would but remember the reader! There is to offset this a fine index and a bibliography.

The scope of the book includes damasks, brocades, and velvets; laces; embroideries, carpets, and rugs; tapestries; chintzes and cretonnes; gimps and trimmings; and, by a slight sophistry, wallpapers and leathers. We learn from the Editor's note that the volume consists in most part of articles published in *Good Furniture* during the years 1915, 1916, 1917, and 1918—also that it is to be "the first in a series of authoritative books on the modernized house-furnishing arts." Just here one may venture the suggestion that bravery of type and format does not make a book authoritative; it is conceivable that an authoritative book may be made by the assemblage of a series of essays or articles—but each essay must be in itself authoritative, and I regret to say that this claim for the book breaks down under this test. After a very careful reading, the most vivid impression is of a collection of articles written for a very high-class trade periodical, with the trade-note apparent almost throughout; it is evident that the articles were intended primarily for the perusal of the trade and the salesmen in the trade; they show evidences of having been written in part around the illustrations; they convey a certain amount of the sort of information known as popular and which is to be found in the books referred to in the bibliography; but for an authoritative presentation of the subjects treated of, one would better look elsewhere. They take at once too much and too little for granted; a certain measure of cultivation on the reader's part might be assumed without the pains to translate for him foreign words generally well known; and, on the other hand, there are long descriptions of various kinds of weaves, not only without any illustrations to make the process of producing them clear, but without even having first defined such fundamental technical terms, for example, as warp and weft—terms easily confused by the general reader and a knowledge of which it would not be impolite not to assume.

As a running accompaniment to the illustrations, as a brief summary of the major characteristics of the several weaves and textiles, it does very well. It is upon the illustrations that one looks back with most pleasure and profit.

But the capital defect of the book is that it gives us no glimpse of that which I began by saying one reads a book to find—the spirit of the author, the man beyond the book. Here is a collection of things upon which there is no personal impress to be felt—it is like furnished lodgings, with the lodger absent. A series of facts are presented, but that is not enough for an authoritative work. One may reasonably expect in a book for which so much is

claimed that the author will use the facts as the text for a commentary more valuable than the facts, transfiguring them, making them luminous; such commentary is conspicuously absent, or, when present, is entirely commonplace and lacks the accent of authority. The Preface may be a guide to the personality we seek; I wonder if it is to be found in the following modest paragraph which sounds more like a publisher's advance notice than an author's preface. "This is the first comprehensive book on the subject to be published. Embodying, as it does, the results of many years of intimate acquaintance with weaves ancient and modern, it appeals equally to those who buy and use, and those who make and sell. Written in a simple, direct style, even when treating technical questions technically, it will be found invaluable not only to those who study and teach in schools and colleges, but also to those who read for personal culture and domestic practice." Delicacy of approach is evidently a superfluous precaution here—here is no shy pride to startle, no tremulous hope to quench. The claim to a simple, direct style is a challenge to examination; it might be called an adverbial style, sentence after sentence beginning after this fashion: "Especially are the color effects noteworthy." "Always the silks that found their way to Rome brought high prices." "Very properly did Pliny classify Egyptian chintzes under painting." The cumulative effect of this affected inversion constantly repeated, so characteristic of the home furnishing magazine blurb, is very tiresome. It is not in such accents that the voice of authority usually makes itself audible.

H. Van Buren Magonigle

News Notes

New Members Elected to the Institute

Birger Kvenild, 510 City Hall, Omaha, Neb. Nebraska Chapter.

James M. Nachtigall, 333 Paxton Block, Omaha, Neb. Nebraska Chapter.

Resolutions of the New York Chapter on a Permanent War Memorial

Just now, when so many communities are considering memorials to commemorate America's deeds in the world war, the wise resolutions of the New York Chapter, passed at a recent meeting, deserve the careful attention of chapters in other communities. Getting away from the assumption that the memorial *must as a matter of course* be architectural in character, and calling for a competition of suggestions and ideas as to the nature of the memorial, certainly bespeak broad-mindedness and proper public spirit for the proponents. The resolutions follow:

Be it Resolved, That the New York Chapter of the American Institute of Architects present to the Fine Arts Federation, for its earnest consideration, the following programme and plan of procedure:

That a committee be appointed to institute a preliminary competition of ideas or suggestions to be open to all citizens residing or maintaining an established place of business in Greater New York.

That their ideas or suggestions be presented in one of the following mediums:

In letter form;
In sketch form, a perspective and plan;
In plastic form, a model and plan.

A location or plot plan to be submitted if the idea be in the form of a structure.

As an essential part of this preliminary competition, a first prize, with possibly secondary prizes, should be awarded.

That the judgment of this competition of ideas be rendered, after public exhibition, by a jury composed of representative citizens. It is suggested that the jury of award be composed of fifteen members, three members appointed by each of such organizations as the New York Chamber of Commerce, the Merchants Association, The Fine Arts Federation, The Society of Arts and Letters, etc.

That the idea awarded the first prize in this preliminary competition be made the subject of a final competition.

That the winner of this final competition be awarded the commission to execute the memorial.

In conclusion, the New York Chapter feels that in this manner can best be obtained the opinion and the sentiment of the citizens of New York City as to the form of the memorial.

Post-War Committee on Architectural Practice

The work of the Post-War Committee is making substantial progress. Several chapters have already held or have planned to hold meetings especially for the discussion of the questions suggested by the Committee. The New York and Brooklyn Chapters held enthusiastic meetings recently, at which members of the Committee's Executive Council were present. At the New York Chapter meeting it was decided to arrange a regular program for future meetings, providing for discussion and debate, one by one, of the numerous questions to be studied by the Post-War Committee. In the next number of the Journal the Committee hopes to make an extended report of progress in many chapters, as well as of meetings of its own Executive Council.

Resolutions of the Illinois Chapter Regarding War Memorials

At a meeting of the Illinois Chapter, held January 14, the following resolutions were passed:

"Whereas, It is the sense of the Illinois Chapter of the American Institute of Architects, in regular meeting assembled, that the successful inauguration and consummation of a war memorial will call for the highest character of architectural service and advice; therefore be it

"*Resolved*, That, in his appointment of the commission provided for in the resolution of Alderman Jos. O. Kostner and ratified by the City Council, the Mayor of the City of Chicago be and hereby is requested to include in the personnel of this commission five practising architects, of whom not less than three shall be members of the American Institute of Architects, and be it further

"*Resolved*, That it is the sense of this meeting that the memorial should be located in conformity with the 'Plan of Chicago,' and, that its principal functions should be to keep green the memory of those in whose honor it is dedicated, to inspire our people with the spirit of patriotism and sacrifice and to be an everlasting and worthy addition to our heritage of beauty and art."

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*

In connection with professional societies, organized bodies, and the following Committees of the Institute, working toward improvements in building materials and methods, and higher ideals in the sheltering of humanity:

BASIC BUILDING CODE, CONTRACTS & SPECIFICATIONS, FIRE-PREVENTION, MATERIALS & METHODS, STRUCTURAL SERVICE

SERIAL 2—FLOORING

Objects

This and the following issue are devoted to a consideration of the various types of finished flooring and the materials commonly employed in their production. The discussion of this subject, like the discussions of other divisions of construction which will appear in subsequent issues, will be confined to the characteristics of the materials and products used, the standards regulating their production and use, and their proper uses. The aim is not to publish standard specifications, but rather to furnish architects and others, particularly the young in either years or experience, with the knowledge essential to the preparation of specifications and the selection of materials and methods through which desired results may be secured. By this means the Committee on Structural Service hopes to make such knowledge more generally available than it has been in the past, and, as a consequence, to make possible the gradual abandonment of the "scissors and paste bottle" method of writing specifications, which has justified in large measure the widespread criticism of architects' specifications generally as being vague and impracticable.

Much of the material that will be published in this department must necessarily be compiled in close coöperation with manufacturers. Where standards have been adopted by professional, industrial, and government organizations, such standards will be incorporated. The Structural Service Department, through the work of the Committee on Structural Service will be consistently employed to effect a closer contact between the architectural profession and other professions, trades, and industries contributing either service or products to building construction.

CLASSIFICATION OF FLOORING

(For index of subjects previously treated, see Index on page 88 and consult the General Index in Structural Service Book, Vol. I

Concrete 2A
Wood 2B, 3B
Tile—Clay and Ceramic 3C
Tile—Composite, Elastic 3D
Tile—Cork 3E
Magnesium Oxichloride 3F
Marble 3G
Mastic 3H

Floors, Concrete. 2A

2A1 Nomenclature:

Cement. The term "cement" is used to describe and designate American Portland Cement complying with the standard specification for that material adopted by the A. S. T. M. on Sept. 1, 1916.

Aggregate is used to describe the inert particles of sand, rock, or pebbles, without regard to their size, mixed with cement and water to give mass rigidity and strength to the mixture when it has set.

Concrete is a mixture consisting principally of cement, aggregate, and water.

Concrete Floors are floors, including their wearing surfaces, which are composed of concrete, often erroneously referred to as "cement floors."

2A2 Aggregates:*

In selecting aggregates for an abrasion-resisting floor, the most advantageous sizes have been found to be from ¼-inch diameter down to that which is retained on a standard sieve having 30 meshes per linear inch. In this grading the coarser particles will predominate. Fine particles are usually broken crystals of rock minerals which will crush more readily than the perfect crystals of larger size, and their presence in quantity will result in wear and dusting of serious moment. Moreover, fine particles make coating of the aggregate with cement almost impossible, and therefore prevent a firm bedding of the aggregate in the mass.

Coarse aggregates should be hard material with the minimum of fine particles, and not exceeding in size that which will pass a ½-inch mesh screen. In better-class work, where good appearance is desirable, it is best to exclude aggregates exceeding ¼-inch in size.

Fine aggregates, commonly sand, should be hard, coarse, free from lime, clay, silt, loam and decayed organic matter and graded from ¼-inch down to that retained on a 30-mesh sieve.

For **Granite Aggregates**, prepared by the Webb Pink Granite Co., see page XV, **Industrial Section.**

2A3 Cement: (See 2A1.)

For an account of the proceedings leading up to the adoption of this standard, see Structural Service Book, Vol. I, 1917, 1E7. Copies of Standard may be secured from the Portland Cement Association, 111 West Washington Street, Chicago, Ill.

2A4 Water:

The only requirements are that the water should be clear and fresh and free from vegetable matter and chemicals that would effect the hydration of the cement.

2A5 Theory of Mixes:*

Concrete is essentially an artificial stone, and the more nearly it approximates natural stone in quality the better will it resist stresses and abrasion. The production of a dustless concrete floor is therefore largely a matter of selecting proper materials and so manipulating them as to produce an artificial stone with natural stone qualities.

The resistance to abrasion of a concrete floor depends in large part on the quality and quantity of the aggregate and the density of the mix, and not on the cement matrix, which is the weakest and most variable element of any concrete combination.

The aim in mixing concrete for floors should be to use the largest possible proportion of aggregates, properly graded for size to secure density, which the unit of cement can take care of without loss of strength in the mass in order to assure a wearing surface composed largely of aggregates. The proportion of water plays an important part in securing and in the failure to secure these results.

The question of controlling water-content in the mix is most important. The mixture should be made as dry as practicable for satisfactory

manipulation. There are two fundamental objections to an excess of water or an excess of cement in the mix: First, either will result in the profuse production of hydrated lime—the product of the reaction between cement and water—which has no structural strength; second, excess water must occupy space in the wet mix, preventing proper compacting of the inert ingredients, upon which reliance is placed for a hard dustless wearing surface, and later, evaporating, leaves a porous mass.

The addition of hydrated lime to concrete floors, even in small quantities, should be avoided, inasmuch as one of the contributing causes to the dusting of concrete floors is hydrated lime liberated by chemical reaction between cement and water.

2A6 Proportioning of Ingredients:*

Sand alone may be used, or, when the floor is to be trucked over, a combination of sand and aggregate, provided they are properly graded from coarse to fine.

The ingredients should be proportioned to secure the densest possible mix. This will be found to result from the mixture of one part of cement to from two to three parts of sand, or sand and aggregate mixed.

The quantities of sand and aggregate and cement should be measured with great care—a bottomless box holding one cubic foot is best for the purpose.

The quantity of water should be kept as low as possible, consistent with reasonable facility in screening. Even the minimum quantity of water to make a screenable mix is excessive, and the excess ought to be extracted after placing. (See 2A7).

Thorough mixing is essential. Machine-mixing is best. If mixed by hand, the dry material should be turned over at least twice and turned over twice after wetting and before placing.

2A7 Placing:

The best result can be secured by placing the top dressing on the base while the latter is still soft, and in any case before the base has taken its final set. If this cannot be done. then the utmost precautions must be taken to secure a substantial bond between the two.

The top dressing should be lightly tamped, leveled and screened immediately after placing. Excess water should then be abstracted and the surface gently floated with a wooden float. No attempt should be made to produce a glazed surface, for such a surface, consisting of cement matrix, will dust off under traffic.

One method of removing excess water which has been found successful, is, after screening, to lay over each floor section a webbing such as burlap or cement sacking, and on top of this webbing to spread dry cement to an even depth. This covering should be allowed to remain in place for from ten to twenty minutes, and considerable water will be drawn, by capillarity, through the webbing and into the cement. The cement, upon removal, can be taken back to the mixer and used in the next batch. Almost immediately after the cement and webbing are removed, the surface can be floated.

A good floor may be produced by finishing the upper surface of the structural slab in the same way as recommended for floors consisting of a top dressing, provided suitable aggregates are used.

The not uncommon practice of dusting neat cement over the surface of a freshly laid concrete floor should be condemned. It is done to take up the excess water which floats to the surface under the screeding and first troweling, to permit of early finishing. For reasons already stated it results in a surface that has no resistance to abrasion. If this practice is to be permitted, the material used for dusting should be a dry mixture of cement and aggregate, precisely the same as that used in the floor itself.

Base. Many failures of concrete floors are directly due to the nature of the base or underbody upon which the topping or top dressing is placed. Frequently the base is a lean cinder concrete which has no strength and crumbles readily. There is no objection to the use of cinder aggregate if it is of hard clinker, screened to remove particles over 1½-inch in size and an excess of fine material. The base should be composed of concrete sufficiently rich to have strength to rigidly support the top dressing, which ought to be not more than 1 inch thick.

Curing. After the floor is set it should be kept moist for not less than forty-eight hours and protected from traffic.

A good method of keeping floors moist has been found to consist in covering the floor with building-paper over which there is placed a thin layer of sand which is kept wet. Canvas, frequently sprinkled, is another excellent covering for a fresh floor.

**Digest of opinions expressed in "Concrete Engineering Hand Book" by Hool & Johnson, and by Leonard C. Wason, W. P. Anderson, and others.*

2A8 Treatments:

(Hardeners, dustproofers and waterproofers.)

Classes of Materials. Materials for these purposes may be divided into six classes, according to the method of application and function:

1. Liquid, penetrating, for which no chemical combination with the cement matrix is claimed.
2. Liquid, penetrating, which combines chemically with the free lime in the concrete.
3. Liquid film coatings.
4. Heated wax.
5. Incorporated additions, inert.
6. Incorporated additions for which a chemical combination with concrete is claimed.

Class 1. Generally consists of light hydrocarbon oil vehicle, with paraffine, gums, vegetable oils and pigments or inert fillers in solution and suspension. The pigment, gum, oil, or wax residue, after evaporation of the vehicle, acts as a void filler and binder, holding the concrete aggregates together.

Class 2. All of these are probably some form or combination of the so-called "fluats" (magnesium fluor silicate) or other acid base, which, it is claimed reacts with the free lime in the concrete, forming a neutral deposit, closing the pores and binding the aggregates together. Apparently the binding (hardening) effect of this neutral deposit is insufficient, for heavy vegetable oils are frequently added. If the neutralizing action of the acid is complete, the added vegetable oils would not be altered (saponified) by the lime.

Class 3. They differ in no fundamental characteristic from paints and varnishes. As they wear through, particularly at doors, the concrete is exposed, and presents an unsightly appearance. Some are applied in two coats, a filler and a finishing coat. Some manufacturers claim that their fillers seal the surface pores of the concrete by chemical combination with the lime content. Such fillers belong in Class 2.

Class 4. Usually paraffine. Penetration is secured by applying hot and reheating.

Classes 5 and 6. These two classes of materials are essentially and fundamentally identical. They are composed of finely ground iron or steel, sometimes combined with other minerals. Those belonging in Class 5 are, it is claimed, rendered inert by various special treatments. They function mechanically as metallic aggregates in the wearing surface. Those, which, on the basis of the manufacturers' claims, are placed in Class 6, are the same as those in Class 5. Some are treated and some are not. There are many contradictions in various claims made by different manufacturers of this class of products. It is difficult to understand how any chemical reaction can take place, even through oxidation, to which the void-filling function is in some cases attributed.

It has been found that the use of the so-called "hardeners" belonging to classes 5 and 6 results in making a poor concrete floor slightly more expensive than a first-class floor. A floor composed of properly selected and graded aggregates, properly proportioned with cement and water to secure maximum density, will not require the use of "hardeners" or "dustproofers." Concrete floors which are to be subjected to attack by acids or alkalies should be treated with a material of Class 1 or 2 or 4, selected, through test, to beat meet the particular requirements.

The "dusting" or disintegration of concrete floors has in some cases been completely checked by grinding the surface in the same way that terrazzo floors are ground. The explanation is that when a concrete floor has been mixed with an excess of either water or cement—usually the former—the aggregate and cement matrix separate, the aggregate settling and leaving a wearing surface of matrix which has no resistance to abrasion. This surface is ground off, exposing the aggregate.

The use of **Lapidolith**, a liquid chemical hardener manufactured by L. Sonneborn Sons, Inc., is referred to on third cover of the **Industrial Section.**

2A9 Safety Devices and Appurtenances:

Concrete floors, those in which the ingredients are properly proportioned and which are properly placed, and sometimes those to which "hardeners" or "dustproofers" of classes 1, 2, 3, and 4 have been applied, will develop under traffic a smooth semi-gloss surface which is slippery and dangerous. This condition has created a demand for various safety or "non-slip" devices, materials, and appurtenances, especially on steps. The use of such devices in connection with concrete sidewalks has become an ordinary precaution against accident. They have also come into common use in concrete floors subjected to intensive foot-traffic.

The materials possessing the required characteristics to the highest degree, and, therefore, in most general use, are metallic lead and carbon crystals. The effectiveness of these two materials arises, in the case of lead, from its ductility and softness, and, in the case of crystalline carbon, from its extreme hardness. The surface of the former will not polish because it is easily abraded, while the latter resists abrasion to a very high degree and, therefore, presents a durable toothed or file-like surface.

Metallic lead is used, either as a filler in protective steel forms which overcome its ductility and prevent rapid abrasion, or in the shape of cast inserts which are set in the concrete surface before it is floated. Carbon crystals are used in several ways. They are cast in suitable shapes to be used as inserts or nosing tile; they are imbedded in the surface of metal plates; and they are granulated and used as an aggregate in the concrete surfaces.

The practical use of **Alundum Tile**, manufactured by Norton Company is shown on page IX of the **Industrial Section.**

Floors, Wood.

2B1 Types of Construction:

The selection of species, grade, and dimensions for wood flooring are influenced by the character and type of the base to which the finished floor is fastened. It will be well, therefore, to discuss briefly the types of base construction as an explanatory introduction to the more detailed and specific consideration of materials for finished flooring.

With respect to type of base, wood floors may be divided into two classes, as follows:

(*a*) Those laid on fireproof floor structures, and subdivided into:
1. Laid on sleepers.
2. Floating.
3. Block.

(*b*) Those laid on frame floor structures, and subdivided into:
1. Laminated—Mill, slow burning.
2. Ordinary frame.

(*a*) 1. *On Sleepers.* Sleepers, usually of yellow pine or spruce, 2 by 3 inches, laid with the 3-inch dimension horizontal, beveled both sides, and placed 16 inches on centers, are laid over the fireproof floor construction which is brought to the correct elevation with a concrete fill. The sleepers should be held in place by means of stamped No. 12 steel clips, secured to the upper flanges of the steel beams supporting the floor arches. If the floor construction is of reinforced concrete, the sleepers may be held in place with any one of a number of clips. One such, which has proved both satisfactory and economical, is a hairpin shaped clip of No. 10 or No. 12 galvanized wire, the bent end of which is inserted 2 or 3 inches into the soft concrete, about 2 to 3 feet on centers, using a plank as a guide. The ends of the clips projecting above the concrete surface are later bent over the sleeper and stapled.

Most city building-codes require that the spaces between sleepers be completely filled with concrete. The embedding of wood sleepers in wet concrete makes necessary some sort of treatment of the sleepers to prevent dry rot. Dipping the sleepers in creasote or other toxic fluids is not a sure preventative of dry rot. Impregnation with creasote oil is most effective, but expensive.

Either single or double floors are laid over sleepers. (See 2B, 2B.)

The use of deadening felt between the under and finished floors is advisable.

(*a*) 2. *Floating, Mill Type.* This type of floor consists of a base or under floor of 3 inches (2¾ inches actual thickness) plank laid flat over the fireproof floor construction and a finished floor. The planks forming the under floor are not secured to the floor construction. They are laid either on a smooth, true, floated concrete surface or on a bed of dry sand not more than 1 inch thick. The planks are plain-edged, laid with ¼ inch open joints. The finished floor holds the under floor in place. This is a satisfactory floor upon which to mount light machine tools. Chases for conduit and pipe are provided by cutting or omitting plank. If there is danger of moisture from the masonry floor construction or processes carried on in the building reaching the under floor, the plank should be treated in the same manner as suggested for sleepers—(*a*) 1—to prevent dry rot.

For finished flooring, see 2B.

(*a*) 3. *Block.* Block flooring is of two distinct types: One, factory flooring, consists of wood paving-blocks impregnated with creasote or other heavy oil, laid either on a sand bed and grouted with Portland cement grout, or in a heavy coat of hot mastic, applied to the concrete surface, with the joints pointed with mastic. This floor is well adapted for machine shops where there is heavy work and traffic, but not where a resilient floor is required. The other type is, in appearance, a parquet floor. It is composed of ⅝ or 1 ⅛-inch flooring in 12-inch lengths, milled with special tongue and groove, and key groove for the mastic in which they are laid. Such floors are generally laid in herringbone or other similar pattern.

(*b*) 1. *Laminated.* These floors are designed to be self-supporting on spans of several feet between heavy joists. They consist of an under floor of heavy plank, tongued and grooved or splined together, and of the thickness required by the span and loading. (See table in Manual of Standard Wood Construction published by the Yellow Pine Manufacturer's Association). A finished floor of suitable material is laid on the heavy under floor. (See 2B.)

(*b*) 2. *Ordinary Frame.* By this term is meant the flooring in ordinary frame structures where the joists are 16 inches to 2 feet on centers. These floors in cheaper buildings are frequently of a single thickness of flooring strips, laid directly on the floor joists. In all better-class work the floors are double, i. e., an under and finished floor. Between the under and finished floors it is customary, and good practice, to place a layer of "deadening" material, usually felt, either impregnated with a toxic oil or untreated. This use of a "deadening" felt not only insulates the floor to a certain extent against the transmission of sound, but also prevents the filtration of dust upward through the joints in the finished flooring.

For illustration of installation of **Hydrex-Saniflor**, made by the Hydrex Felt & Engineering Co., see page XXVIII **Industrial Section.**

2B2 Organization of Wood-producing Industry:

For a list of the organizations in the industry, and the standard gradings for the various species, see **Structural Service Book, Vol. 1, 1917, Serial 5.**

2B3 Materials:

Nomenclature. Too much emphasis cannot be laid on the importance of using in specification descriptions the terms and gradings adopted as standard by the various species associations. No others are recognized or understood by the dealers and producers. In spite of the great amount of effective educational work done by the National Lumber Manufacturer's Association and other organizations, the descriptive term "strictly clear" and other similar terms still frequently appear in architects' specifications. Such terms mean nothing and merely serve to make trouble through misinterpretation. The standard grading rules may be secured gratis from the species associations.

Species. The species of wood finding employment in floor structures are grouped below with respect to their characteristics, such as strength, density, resistance to the penetration of moisture and to rot, finishing, as well as to price, and the uses for which those characteristics make them peculiarly suitable:

Sleepers: Yellow pine, spruce, Douglas fir, and occasionally redwood. The natural resistance of redwood to dry rot seems to warrant its more general use for sleepers, especially where transportation charges do not put it out of competition with other woods more available.

Under floors, heavy plank for laminated mill floors and for "floating" floors: Yellow pine, North Carolina pine of the better grades, Douglas fir, and spruce.

Under floors, on sleepers and joists: Yellow pine, North Carolina pine, spruce, Douglas fir, and, in cheaper work, hemlock.

Finished floors: Yellow pine and North Carolina pine, both flat and edge grain; oak, red and white, quarter-sawed and plain; red and white birch, maple, red beech, spruce, Douglas fir. Mahogany, walnut, ebony and teak are also used for color strips in floor-borders. Teak is occasionally used in the form of ¼ inch sawed veneer on a softwood backing for an entire floor.

Note:—Space will not permit of reprinting the grading rules and standard dimensions for these materials. They may be secured, as before stated, from the various associations of manufacturers.

The discussion of wood flooring will be concluded in the next issue.

STRUCTURAL SERVICE DEPARTMENT

A Standard Construction Classification

Every well-ordered office ought to have a reference-file containing classified information of value in connection with the preparation of specifications, and for use in selecting materials and methods for securing desired results. The Structural Service Book for 1917 indicates what a wealth of material is available, much of it for the asking. The information catalogued therein, or much of it, should be in every progressive office, readily accessible for reference. Such material may be in an office but if it is not classified and filed it is of little or no use.

With a fairly comprehensive knowledge of the characteristics and uses of materials and methods such as may be gained by a free employment of the information which the Structural Service Book places at our disposal, construction may be reduced to an exact science, so far, at least, as established fact extends, or up to the border land of truth, beyond which lies the twilight zone of exploration, exploitation, experimentation, and mere hypothesis. No architect with a fully developed appreciation of service and of his obligation to serve well and faithfully his client and the public interests, cares to enter the twilight zone in the course of his practice. Yet he is constantly tempted to do so, and, not infrequently, due to his inability to discern the dividing-line between truth and fiction, he is misled and fails in his effort to secure the desired result. The safeguard against such failure is a classified file of fact which may be used as a basis of judgment and decision.

The Institute has been most successful in securing compliance with the standards in the matter of sizes for advertising, and this greatly facilitates filing for reference. The next important step, one which the architect himself must take, is to establish a standard construction classification and index for filing. If this were done, all advertising matter designed to reach the architect could be published with the file number on it, so the office boy might place it correctly in the file. Advertisers would not have to be urged to adopt this practice.

Some architects and many engineers have developed classifications and filing systems of their own. Some of these serve their purpose admirably, but there is no uniformity. Beyond an effort made four or five years ago by a joint conference of engineering societies, at which the Institute was represented, to arrive at a standard classification for "engineering knowledge," no attempt has been made to construct a classification for use in architects' offices.

The classification used in the Structural Service Book is satisfactory enough for indexing a bibliography of reference works, but it has no logical connection with the mental process incident to writing specifications, or the customary division of a building operation into trades or successive stages of construction. A classification for use in an architect's office ought to follow closely, it would seem, the major divisions and subdivisions of an orderly specification. It is that sort of a classification which the profession needs; and when there is one, the whole recording machinery of the architect's office may operate on it. The drawings may be numbered according to it, so they would find their places in the file under structural steel, masonry, plastering, or cabinet work, as the case might be. Correspondence would be numbered for file on the same system. Catalogues, reference works, old and current specifications, all would be filed under the same classification as drawings and correspondence.

The material published in the Structural Service Department ought to be indexed on the same classification for filing. The establishment of a standard classification is, indeed, of prime importance, an essential prerequisite to the convenient use of information which should be instantly accessible to every practising architect. The Committee on Structural Service has undertaken the task of filling this need.

There must be some such classification in existence. There must be some in architects' offices that have been patiently and carefully developed to meet the peculiar needs of architectural practice. They may not be perfect, but capable of perfection. The easiest way to discover the existence of such things is to precipitate a discussion of them. And the simplest means of precipitating a discussion is to advance an idea. It matters little whether the idea is right or wrong, so long as it is put out, and the committee proposes to put this theory to test. We print below a suggested classification. If you don't like it, say so and tell us why.

NOTE.—*The Committee has the extensions for all of the major divisions. Copies will be furnished on request.*

Proposed Architect's Classified Index for Correspondence, Drawings, Catalogues and Specifications

January 15, 1919.

0. Other Architects' Work.
1. Preliminary Work.
2. Surveys, Permits and Building Data
3. General Contract.
4. Preparation of Site.
5. Excavating.
6. Masonry.
7. Waterproofing.
8. Structural Steel.
9. Metal Work.
10. Roofing and Sheet Metal
11. Carpentry.
12. Furring and Lathing.
13. Plastering.
14. Marble and Slate.
15. Tiling.
16. Painting.
17. Glazing.
18. Hardware.
19. Furnishings.
20. Landscape.
21. Plumbing.
22. Heating and Ventilating.
23. Electrical Work.
24. Refrigeration.
25. Power Plant
26. Elevators.
27. Equipment. Not otherwise classified.
28. Miscellaneous Unrelated.
29. Models.
30. Tests.
31. Estimates.
32. Changes.
33. Requisitions and Payments.
34. Superintendence.
35. Office Organization.
36. Publicity.
37. Professional and Scientific Data.
38. Private and Personal.

1. *Preliminary Work.*
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   - 1.1 Preliminary Drawings.
2. *Surveys and Permits.*
   - 2.01 Plot Surveys.
   - 2.1 Measurements from Building.
   - 2.2 Building Permits.
3. *General Contract.*
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   - 3.1 Temporary Constructions.
   - 3.11 Property Protection.
   - 3.12 Sidewalk Bridges.
4. *Preparation of Site.*
   - 4.1 Demolition.
   - 4.2 Shoring.
   - 4.3 Underpinning.
5. *Excavating.*
6. *Masonry.*
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     - 6.012 Lime.
     - 6.013 Sand.
     - 6.014 Broken Stone.
     - 6.015 Gravel.
     - 6.016 Cinders.
     - 6.017 Concrete.
     - 6.018 Mortar.
     - 6.019 Mortar Colors.
   - 6.1 Foundations.
     - 6.11 Rubble or Brick.
     - 6.12 Caissons.
     - 6.13 Piles.
     - 6.14 Other Types.
     - 6.15 Subsoil. Drainage.
   - 6.2 Brickwork.
     - 6.21 Common.
     - 6.22 Face.
     - 6.23 Moulded.
     - 6.24 Fire.
   - 6.3 Stonework.
     - 6.31 Rubble.
     - 6.32 Base Courses.
     - 6.33 Face Work 6.431 Model or [Superstructure.
     - 6.34 Cleaning.
     - 6.35 Artificial Stone.
   - 6.4 Terra Cotta and Gypsum
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     - 6.42 Ornamental.
     - 6.43 Models.
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     - 6.51 Mass.
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     - 6.56 Floor Fills.
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     - 6.58 Expansion Joints and Acces- [sories.
     - 6.59 Granolithic.
   - 6.6 Paving.
     - 6.61 Stone Blocks.
     - 6.62 Wood Blocks.
     - 6.63 Brick.
     - 6.64 Composition and Other [Block.
     - 6.65 Asphalt.
     - 6.66 Vault Lights. [sories.
     - 6.67 Expansion Joints and Acces-

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